Clinical Lecture
ON THE
CURABILITY OF ACUTE TUBERCULOSIS.

Delivered at the Westminster Hospital.

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GENTLEMEN,—The case I propose bringing before you involves a curious problem of practical medicine in the nature of a dilemma. Acute tuberculosis is represented to us from the anatomical point of view as a disease which is uniformly fatal. At the bedside, however, we meet with examples, indistinguishable from acute tuberculosis, which nevertheless recover. Are we to say of these that our diagnosis has been in error, or that the statement of the uniform fatality of acute tuberculosis is not without exception? Is it more probable that the diagnosis is wrong or the treatment curative? If the diagnosis be in error, how may such errors be avoided in the future? If it be the treatment that makes all the difference, in what manner is such treatment to be employed, what is the evidence of its efficacy, and to what stage of the disease does it apply? I need not say that questions like these are of the highest practical interest. They are so from the pathological side, owing to the very intimate likeness between acute tuberculosis and enteric fever. They are so still more from the treatment side, owing to the assertions of some that the hypophosphites of lime and soda are directly curative of acute tuberculosis.

Now the case shortly summarised from the notes of Mr. Butler, clinical clerk, is as follows:—

George C——, aged sixteen, a well-nourished youth, but of tubercular aspect (his mother being consumptive, and two of his maternal aunts having died of acute phthisis), was admitted on May 31st. Just a month before, he had been standing at a pier-head when heated from fast running, and in that way, as he supposed, caught cold. Shivering came on the next day, and he kept his bed for a fortnight, being "very ill"; the chief symptoms were coughing, with much expectoration, repeated nose-bleeding, and profuse sweating, especially at night. At the end of the fortnight the boy improved sufficiently to get up. He had lost much flesh during his illness, and his cough and sweating continued. As soon as he could bear the journey he came to hospital, where he was admitted at the date mentioned. When first seen the patient's aspect and pose indicated extreme depression, and there was that blush on his cheeks which, taken together with his lustrous eyes and long eyelashes, would suggest to the observer, other things being excluded, acute tuberculosis. The temperature was 104·2° on the first night (for the next eight days the highest daily reading reached or exceeded 104°). The tongue was furred; bowels confined. Pulse about 100. A very careful examination of the lungs discovered large rhonchi merely, no dulness; no small bubbling; no physical evidence of any kind, except of bronchial flux; the sputum bronchial and uncoloured. Such was his condition on admission, and so it continued for fourteen days; a condition, namely, of extreme depression, temperature ranging daily between 102° and 104·6°; absolute loss of appetite; sleeplessness, night-sweating, and wearing cough, with mucous expectoration, sometimes blood-streaked; the bowels being confined (except for one occasion, when they acted copiously after medicine), and the pulse seldom much exceeding 100. But what was the most striking and the most suggestive, or, as it seemed, probative of the diagnosis of tuberculosis, was that with the progress of time the patient rapidly wasted. That and the profuse sweating and prostration were the main features of the case, yet still with no more positive physical signs than those mentioned. Between the sixth and the twelfth days from admission the prostration was so extreme that it was only with great difficulty he could be raised, or indeed moved, for the purpose of examination. Yet, with an eye to possibilities, attention was continuously directed to the lungs, and it may be said positively that although bronchitis persisted, and some small bubbling was audible for a time at the left base, there was never any sign of consolidation or pneumonia. Howbeit, on the fourteenth day from admission (which would be six weeks from his first seizure and a month from the time when he had a temporary mend) signs of improvement were observed in that the night temperature fell from 104° to 103°, and the bodily weakness was less. From that day to the nineteenth a continuous progress began to open out hope of ultimate recovery. By the twenty-second day (making sixty-two days from the commencement of illness) that hope became almost assurance. The temperature had gradually fallen, and was now hardly above normal; the wasting and sweating had ceased; and, above all, the extreme bodily prostration had disappeared. With this marked improvement the catarrhal sounds within the lung underwent but little change, and on the twenty-eighth day, when he was up and convalescent, some bubbling rhonchus was audible at both bases. During the extremity of his illness it was impossible to take his weight; the only measure of the loss of flesh, therefore, is quite inadequate to express the fact. Before his illness he weighed 7 st. 10 lb.; on the twenty-seventh day after admission, and when approaching convalescence, he weighed 6 st. 8½ lb.; a week later he had gained exactly 4 lb. As regards treatment, all that it is necessary to say now is that on the 7th of June, when near his worst, and seven days before he began to mend, the boy was given ten grains of hypophosphite of soda every four hours, and this was continued for the rest of the acute illness.

In the main features of this remarkable case there are, as I think, to be found some important practical lessons—facts which are too little recognised and probabilities which are too easily set aside. Take first the fact itself. Better than all theories or precarious deductions is the knowledge which this case gives that in a tubercular subject a pyrexia of indefinite duration, which entails such wasting as almost to reach the point of emaciation, and is attended by profuse night sweats and extreme prostration, is a condition which may and which does recover. Let it be enteric fever or acute tuberculosis, or what you will, this combination of symptoms, grave as it is, as a rule fatal as it is, is not absolutely hopeless. That made certain, many other questions press for consideration. What are the probabilities in regard to diagnosis, and how are these affected by the fact of recovery? What are the particular circumstances of these recovering cases as to treatment? What is the likelihood that we may ever succeed in making recovery more common?

It has been said—the expression indeed is attributed to a very sagacious physician of our day—whenever you have to deal with pyrexia of anomalous character, the other symptoms not fitting in with any recognised pattern of disease, always put to yourself this question: "Have we here to deal with enteric fever?" But this admirable hint, so serviceable to prevent grievous errors, is not to be twisted from its real meaning. Some would put it not as a question to be deliberately decided yea or nay, but as an affirmation. Here is a pyrexia with anomalous symptoms. I cannot fit it to anything in particular; I will call it enteric fever, an affection which has so many forms that it may be fitted to anything.

Only just now, while I am speaking, we have an illustration at hand of the errors that may be committed and the valuable clinical knowledge that may be overlooked by such conduct as this. A patient in Burdett ward, with symptoms corresponding in many respects—in aspect, in temperature, in nervous prostration, in the colour and consistence of the motions—with enteric fever gets, too easily, credited with that disease. And if by any accident she had passed from our notice in the second or the third week of illness, her precise condition would take its place in our memory as a contribution towards the full conception of the many ill-defined modes of enteric fever. But it so happened that at the end of the fourth week she died, exhibiting post mortem, not enteric fever, or any trace of it, but the most characteristic and extensive ulcerative endocarditis.

In the case before us, however, there is not the same excuse as in the other—nay, the same necessity, we may almost say—for making use of enteric fever to eke out a doubtful diagnosis. Except for febrility, this youth had nothing of enteric fever about him either in his symptoms or in their duration. We put the question as we are advised, and we answer it without hesitation in the negative. Be it what it may, the disease we have before us is not enteric fever. Proceeding, as is the custom in such cases, upon the principle of exclusion, that alternative, at all

events, may be dismissed. But may we not go further, and say of this boy not only that his illness was *not* enteric fever, but that it *was* acute tuberculosis? Remember that while acute tuberculosis is very commonly mistaken for typhoid fever, the converse of this is not true. We have here the proper tubercular symptoms clearly marked out from the rest, symptoms which have been met with repeatedly in connexion with grey miliary granulations. There seems hardly room for mistake. Only when we are confidently expecting the boy's death, he disappoints that expectation and recovers.

Is then the fact of recovery to negative the diagnosis of acute tuberculosis? Of the actual deposit of tubercle it may indeed. No one, I suppose, believes that these little bodies may be thickly strewn throughout the lung in the way that we find them and the patient nevertheless recover. But there is much reason for believing that we may approach —who shall say how near?—to that pathological event and then stop short; just within the boundary, it may be, which separates extreme peril of death from the absolute certainty of it.

Did time serve I could adduce much evidence to prove that the condition we recognise clinically as acute tuberculosis is not necessarily fatal, whether occurring in youth and tending towards the lung (yet with no admixture of phthisis in the sense of lung destruction), or occurring in childhood and tending towards the pia mater. We get the very same group of symptoms in cases that are exceptional in that they recover, as in cases that form the rule in that they die; and, moreover, the earlier in life the observation is made—the nearer we get to that period when tuberculosis is seen, so to speak, in perfection,—the more does it appear that individuals may exhibit all the symptoms, not only premonitory of tuberculosis, but which are commonly believed to announce it, and then, when the diagnosis is complete and the prognosis seems certain, turn round and recover.

But I would ask you to look at the matter upon a somewhat broader ground. The recovery from tuberculosis, meaning by that term the clinical phenomena commonly supposed to be indicative of the deposition of miliary tubercle, so far from being rare, is a matter of frequent experience. What is rare, although less rare, I believe, than seems, owing in great measure to the habitual invocation of enteric fever, is its recovery when it has passed a certain stage. We all know and teach that children of a particular conformation, whose scalps sweat at night, who grind their teeth and but half close their eyes in sleep, and so forth, are especially prone to tubercle and to death by meningitis. We advise that particular care should be taken to preserve such children from cold, from foul dwellings, from overmental application; and we insist that the first signs of pyrexia or sickness, signs insignificant with other children, need immediate attention with them. Yet, in spite of all our precautions, or for the want of them, such children get pyrexia more often than others. A certain proportion—the most tubercular, if we may so speak—will inevitably die; the rest will die or not, according to the care that is taken of them, the food they get, and the place where they live. But hardly any, until the time of their special liability is over, will escape attacks in which they will be pyrexic and waste, and show symptoms, cerebral and other, which are often absolutely indistinguishable from those that usher in a fatal meningitis.

Still more striking is the case of young adults who are tubercular. With these we know that the chief danger is not for the brain, but for the lungs; and we have strong hope that if we can tide them over the period of youth later manhood will give them comparative security. But how is it with them during this time of jeopardy? Much more than with the little children, it is apparent that they will live or not, according as their circumstances are ordered; that their life depends, that is to say, upon the conditions of living being made the easiest for them. A young man of tubercular tendencies (I am quoting from the fact) wastes, and sweats, and coughs, but with nothing discoverable in his chest beyond bronchial catarrh. Soon he is too weak to leave his room. He is advised to take a sea voyage, and to remain for a year or more in New Zealand. There he loses his cough and his weakness, puts on flesh, takes to an active out-door life as a sheep farmer, and presently, as is but natural, pining for his home and his old profession, and believing himself perfectly recovered, he returns to England. Again there are the wasting, the cough, and the depression; and this time the symptoms are so threatening that there is grave doubt whether he can be got on board ship, or whether in his extreme state a long journey is justifiable. But once more away from the country which is not liveable for him the threatening symptoms disappear, and his health returns.

Who then, I ask, will venture to say or to write in a book at what particular stage in the tubercular fever (so to call it) all expectation of recovery is cut off; or, rather let me say, not so much expectation as possibility? It would of course be a grotesque misrepresentation of nature to pretend that such a case as ours in Burdett ward is not highly exceptional; or that with such symptoms any other result than death is to be looked for. But who is to draw the line between recoverability and irrecoverability? who is to say what particular phase or event in the clinical history represents the actual development of tubercle and seals the doom of the patient? We have ample justification, I contend, in laying down as true this proposition: in youth as well as in childhood threatened tuberculosis recovers. We can tell when such recovery is to be looked for; we can tell when it is highly improbable; we can hardly tell, certainly we cannot tell precisely, the point at which it becomes absolutely impossible.

But there is another point for consideration. Tubercular individuals, children at all events, will present the clinical symptoms of tubercular meningitis, and die in the usual way, but post mortem neither tubercle nor inflammatory exudation will be discovered.[1] We have to reckon, then, with the following facts, and to make out of them the best hypothesis we can. There is a certain set of symptoms by means of which acute tuberculosis is commonly recognised at the bedside. Such symptoms commonly end fatally, and after death grey granulations are found in certain situations. But to this rule there are two kinds of exceptions. One where the symptoms in question do not end fatally; the other where, although ending fatally, no trace of the grey granulations is to be found.

What, then, is the hypothesis—I mean the working provisional hypothesis—which best fits this state of facts? I think it is this: Acute tuberculosis regarded from the clinical point of view is to be distinguished from the actual deposition of tubercle regarded as an anatomical fact. The early symptoms of acute tuberculosis are those which precede the actual development of the grey granulations. This latter event, analogous in some respects to the eruption of a specific fever, is preceded by certain phenomena extending over a variable period of time, during which restitution is still possible. And while, on the one hand, the deposition of tubercle marks the termination of hope, on the other the stress of the premonitory fever which precedes that occurrence may of itself suffice to produce death.

But here the therapeutist steps in, and clearly there is a place for him. If his experience be large, it will furnish him with examples which will easily push aside the assertion that the acute tuberculosis which seems to recover is in fact not what it seems, but enteric fever, or something else. He has, then, only to appeal to the dogma that acute tuberculosis, pursuing its natural course, is necessarily fatal in order to reach the position he desires—the doctrine, namely, that the cure of this disease is accomplished through the agency of the hypophosphites of lime and soda. My own practice with reference to such drugs is this. In the belief that they are at least harmless, that they are commended for a class of affections very bare of remedies, and where some medicinal treatment or other is reasonably expected on behalf of those who are acutely and progressively ill, I have uniformly given the hypophosphites in every case of acute phthisis or acute pulmonary tuberculosis that has been under my care for many years. Without being at all struck with the effects of a remedy very highly commended in some quarters, I can certainly quote instances where the hypophosphites have been so far injurious that patients have improved on their being discontinued. In the present case ten grains of the hypophosphite of soda were given every four hours, commencing a week after the patient's admission. His worst and weakest time, you will remember, was the week succeeding. How far this is consistent with any curative power of the hypophosphites I leave you to determine. For myself, I believe that when cases like this one of ours are more widely recognised; when the fact of recovery is admitted not only by

[1] As authority for this statement I might quote Dr. Austin Flint, Dr. Gee, and others. See a very suggestive paper by Mr. Howard Barrett, on Tubercular Meningitis, in the tenth volume of the St. George's Hospital Reports.

those who profess to have brought it about, but by others as well who are prepared to note *all* the circumstances under which it occurs,—when that time comes the curability of tuberculosis will be found to depend not upon the hypophosphites or any other preparation of pharmacy, but upon the employment of those agencies for its cure which are suggested by the causes that provoke it. Is there no therapeutical teaching in the fact that the tuberculous children of the poor develop tuberculosis as the rabbits do, by living in impure air and damp underground cellars; or the fact that a youth of tuberculous family will escape the fate of his brothers and sisters, and the fate that over and over again has threatened himself, by removing to some better country?

Those who are the most firmly persuaded of the incurability of acute tuberculosis will not deny that there are certain well-recognised signs by means of which the tuberculous are distinguished from the rest of the community; they will not deny that there are certain localities and certain modes of living the least hostile, each for each, to the lives of such persons, and that by having recourse to such places and plans the life that is repeatedly menaced during childhood and youth may reach a healthy and secure manhood. But why need we stop here? I firmly believe that the time will come when what everybody admits will no longer be applied partially, but carried out to its full conclusion; and when it comes patients suffering like this boy whose case we have been discussing will be removed, wherever feasible, from their town surroundings, and placed without delay or fatigue in the best possible conditions for recovery upon some hill or mountain top, or, at all events, in the pure air of the country.

ON THE

INVISIBLE CORPUSCLES OF MAMMALIAN AND OVIPAROUS BLOOD, AND THEIR RELATION TO FIBRIN FORMATION AND COAGULATION.

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IN the *Bullettino della reale Accademia Medica di Roma*, Anno viii., No. v., pp. 174, *et seq.*, will be found a communication presented by Associate Colosanti on behalf of Professor F. Legge, which concerns itself with the controversy between Professor Bizzozero and myself. The communication is entitled, "Observations on the Blood of the Salamander and of the Triton, in relation to the plates (piastrine) of Bizzozero, and to the Invisible Corpuscles of Norris." The author first refers in the following terms to the original communication by Professor Bizzozero: "The distinguished Professor Giulio Bizzozero at the sitting of the 9th of December, 1881, communicated to the Royal Academy of Turin the discovery of a new morphological blood element to which he gave the name of 'blood-plate.'" The characteristics of this new element are that it is one-third or one-half smaller than the red corpuscles; that it has the form of a disc, or of a lens; and, finally, that it is colourless and excessively pale. This great discovery was made in the circulating blood, in which the plates are seen irregularly distributed among the red corpuscles. Bizzozero thinks that these little plates are to be regarded as special elements, since they are morphologically perfectly distinct, as much from the white corpuscles as from the red ones, and he thinks that from them originate those special accumulations of granulations to which modern histologists, and especially Ranvier, attribute the coagulation of the blood. If, in fact, the blood be observed outside the bloodvessels, without the addition of any reagent, the little blood-plates are seen to break up into exceedingly fine granulations, and at the same time is noticed the formation of a fine meshwork, which is in direct relation to the above-named granulations. The presence of this network, which is composed of fibrous substance, points to the initiation of the blood-clot. Even the formation of thrombus and the coagulation of protoplasmic liquids, according to Bizzozero, is in connexion with the blood-plates. The same author has lately published that in the lower mammals the said plates are nucleated, and correspond to those elements which Hayem has designated hæmatoblasts.[1] Subsequently, at a sitting of the Turin Academy, March 3rd, 1882, Professor Bizzozero states facts which, according to him, raise to a certainty the belief expressed that the blood-plates have, in relation to the formation of fibrin the function which Mantegazza and Schmidt attributed to the white corpuscles. This last fact was contested by Dr. Giulio Fano, in a note on the coagulation of the blood, published in vol. v., fasc. 4, of the "Archiv per le Scienze Mediche." In this note the author mentions facts which tend to demonstrate that, excluding the presence of the blood-plates, we can equally have coagulation in which, according to him, the white corpuscles take the most active part. He asserts, moreover, that upon the latter depends the coagulation in the lower vertebrata, since in them the blood-plates are completely absent. It will be observed that neither of these authors appears to consider that the blood-plates, or the white corpuscles, or the granules which they yield, are actually transmuted into fibrin, but only that they excite or determine its formation, and that the granules add to the bulk of the clot by becoming attached to the true fibrin, which is spoken of as being deposited in their vicinity.

Two leading considerations present themselves in connexion with these claims of Bizzozero—1. Is he the actual discoverer of the particular corpuscle in question? 2. Has this corpuscle the properties he ascribes to it, and if so was he the first to determine this? In the first place, these are visible delicately granular bodies, lenticular or disc-shaped, of smaller size than the red discs, colourless—that is, free from hæmoglobin, and nucleated. Now, here we have six very distinct characters, by which the corpuscles in question may be identified; and when we add to this the fact that they may be seen without difficulty, not only in the circulating blood, but also after it has been shed, it would certainly be a somewhat remarkable circumstance if they had altogether escaped the attention of the great army of microscopic observers of the blood. To the credit of physiology this is not the true state of the case. For several years past I have myself been acquainted with these particular corpuscles, and I presumed that other physiologists were also equally well informed. So far as I am able to understand the question, the confusion which exists appears to have entirely arisen from the too common practice of confounding together the leucocyte or white blood-corpuscle and the true lymph disc. In my first paper on the development of the blood[2] I pointed out that an able English investigator of the blood, Professor Gulliver, so far back as 1846, in his annotations to the collected works of William Hewson, strongly insisted that a distinction existed and ought to be recognised between the true lymph-corpuscles and the pale or white corpuscles of the blood, both as to their physical and chemical characters. He says, "The globules of the chyle, of the thymus fluid, and of lymph are smaller and differ in structure from the pale globules of the blood. In these last there are two, three, or four nuclei, easily seen when the envelope is made more or less transparent or invisible by acetic, sulphurous, citric, or tartaric acid. But the globules of chyle, of lymph, and of the thymus fluid, like the nuclei of the red corpuscles of the oviparous blood, are only rendered more distinct and slightly smaller by any of these acids, so that the central part presents no regular nuclei or divided nucleus, such as are contained in the pale globules of the blood. In short, these last-named globules have the characters of perfect elementary cells, while the former globules, as shown in the note to 'Gerber's Anatomy,' page 83, resemble, and probably are, nuclei or immature cells." Professor Gulliver also gave extensive tables of the measurements of red discs, of the pale corpuscles of the blood (leucocytes), and of lymph, chyle, and thymus corpuscles, under these distinctive headings, and pointed out that while the average diameter of the red disc in man was about $\frac{1}{3200}$, and that of the white corpuscle about $\frac{1}{2000}$, that of the true lymph corpuscle was only about $\frac{1}{1000}$ of an inch, and that the latter was lenticular in form. He also made the additional statement, "In the blood besides the common pale cells (white corpuscles) there are a few smaller corpuscles, like those of lymph."[3] It is, too, a matter of history that the late Professor of Physiology in the University of Edinburgh, Dr. Hughes Bennett, did not, as so many have done, confound the white corpuscle (with which he was necessarily

[1] The oviparous hæmatoblasts of Hayem, not the mammalian, are here referred to.
[2] Birmingham Philosophical Society, 1878.
[3] Hewson's Works, pages 244 and 254.

so familiar) with the true lymph corpuscle, which latter element, as will be seen from the following quotations, he regarded as passing from a granular globular body, having a diameter of about $\frac{1}{1000}$ of an inch, through the disc or flat stage, into the form of a colourless biconcave disc about the size of the red disc. After speaking of the molecular basis of the chyle, described by Gulliver, he says:—"Floating amongst these (oil globules) we observe globular and granular bodies about $\frac{1}{1000}$ of an inch in diameter, which, on the addition of acetic acid, exhibit a thicker margin than they did before. In chyle taken from the thoracic duct there are also biconcave flattened discs, exactly resembling the coloured blood-corpuscles in size and form, but destitute of colour. Between these two kinds of corpuscles (the granular bodies, about $\frac{1}{1000}$ of an inch in diameter, and the colourless biconcave discs) all kinds of intermediate stages may be observed, so that there can be little doubt that the former become flattened and are changed into the latter. They are, in fact, embryo blood-corpuscles, which become coloured in the lungs." Again, speaking of the lymphatic glands, he says, "On cutting into these glands shortly after digestion, and examining microscopically the fluid they contain, it may be seen that a molecular fluid (first described by Gulliver) is more or less crowded with naked nuclei, which resist the action of acetic acid. On repeating the observation on fluid taken from the thoracic duct the same thing is noticeable, only several of the nuclei are more flattened, and in every point, except colour, closely resemble the red blood-corpuscles."[4] Kölliker also recognised as the smaller chyle-corpuscles the bodies which I have called the primary lymph discs, and noticed also that their nucleated character disappeared, and that they became flattened. In my first paper on the development of the blood I have taken great pains to show that the so-called lymph globule is in reality a disc-shaped body, smaller than the blood disc, and that it consists of two varieties, to which I have given the names primary and advanced: the former being a true cell, the capsule or exterior of which is intimately applied to its nucleus, but which can easily be distended by osmosis, and its nucleated character revealed; the advanced lymph disc being, on the contrary, the delicate naked nucleus of this body, set free by disintegration of its capsule; both these bodies enter the blood, the former in health in small numbers only, and these remain visible, but become more delicate in appearance than they are when seen in the glands; this change appears to depend simply upon their transfer into the blood, for it may be effected artificially—that is, by adding gland discs to fresh blood.[5]

The advanced or nuclear lymph discs pass into the blood in far greater numbers, but for the most part being colourless and already smooth, enter at once upon their stage of existence as the invisible discs of the blood; a few of these, however, which are less perfectly elaborated, may remain for a time visible as finely granular discs. The former are the bodies which Professor Bizzozero has observed in the circulating blood of the lower mammals, in which they may be readily seen both while circulating and after the blood is shed. These bodies conform entirely to the description given by Professor Bizzozero, being visible, delicately granular in appearance, disc-shaped in form, of smaller size than the red discs, and colourless—i.e., free from hæmoglobin, and nucleated; and as there are in the blood no others in the least degree like them, it is logical to conclude that they are the bodies which he has observed. If this be so, although we may regard Professor Bizzozero as an independent observer of this particular corpuscle, we cannot admit his claim to the discovery of a new and previously unknown element of the blood. We come now to consider the *rôle* which this corpuscle plays in fibrin formation and the coagulation of the blood.

In February, 1878, I pointed out that there existed in the blood a series of corpuscles, the disintegrative changes of which were competent to account for and to explain all the phenomena of fibrin formation, and that the existing chemical views of coagulation must give place to morphological ones. I designated this series of corpuscles the "fugitive discs of the blood and lymph," in contradistinction to the more permanent corpuscles. I also photographed step by step the successive changes and variations in these bodies till they presented themselves in the well-recognised forms of fibrin—e.g., films, networks, embolic masses, &c. Of this fugitive group of corpuscles some are visible, others barely visible, and large numbers wholly invisible. At both ends of the group there are visible discs, for it includes on the one hand the lymph discs which are antecedent to the invisible blood discs, and on the other those discs which have again become visible by the acquisition of colour, but which are not yet sufficiently stable to be included in the permanent group of red discs. These limitations I have repeatedly stated in my papers. That Bizzozero has been working on the lines I laid down in my papers to the Birmingham Philosophical Society in 1878 and 1880 will be sufficiently obvious to anyone who will take the trouble to read the preface of my work on the "Physiology and Pathology of the Blood," in which, to facilitate comparison, I have taken the liberty of placing our mutual statements in contrast side by side. It will be seen that the statements in respect to fibrin formation and the staining and preservation of the corpuscles concerned in it are essentially and almost verbally the same, and that mine possess the advantage of having been published for several years. My contention briefly stated is, that the red blood disc of the mammal begins its existence as the primary lymph disc, a body which is found in the spleen, in the lymphatic glands, in the thymus and thyroid, and in the bone-marrow. While in its own proper organs this body undergoes a development by which its nucleus is set free, this nucleus is transmitted to the blood, and becomes its smooth, colourless, invisible disc, which, taking on the biconcave form, gradually acquires colour, and becomes again visible in the blood as the palest order of coloured discs. Now the corpuscles concerned in fibrin formation in the blood are the lymph discs, the invisible discs, and the palest order of the coloured discs of the blood; to these, taken collectively, I have given the name of the "fugitive group." It will be remembered that I have divided the lymph discs into two varieties, the primary or nucleated, and the advanced, which is the liberated nucleus. As the corpuscles Bizzozero refers to were nucleated, it must be the former of these bodies; and if this be so, it is of the corpuscles of the "fugitive group," the one which is most permanent, and which therefore plays a smaller *rôle* in fibrin formation than the others. The bodies which take the greatest part in the formation of fibrin, both in the lymph and the blood, are simple nuclei; true fibrin, in fact, in all cases is formed of the material of which nuclei is composed.[6]

It is the advanced corpuscle, in other words the free nucleus of the lymph, which causes its coagulation, and it is this same body, when promoted to the dignity of a young blood disc, which causes the coagulation in shed blood. The few primary lymph discs (so-called blood-plates of Bizzozero) which are, as it were, accidentally present in the blood play but a very insignificant part in fibrin formation, very little, if any more, than the white corpuscles. I wish it to be distinctly understood that my views of the coagulation of the blood differ fundamentally from any which have hitherto been propounded; I desire to state them clearly and unmistakably, and then to abide the issue of time. The coagulation of the blood I believe to be purely a physical and morphological, and not a chemical, process; it is certainly a process every step of which can be traced by the microscope, and can be shown to depend on physical changes in bodies which were orginally definite corpuscular elements of the blood, changes, occurring, in fact, in those corpuscles which I have included under the designation of the "fugitive group." These corpuscular changes are themselves sequential upon certain general alterations in the blood, when it is shed, as yet of an obscure character. Such a view of course excludes the idea that the liquid of the blood contains in solution the elements necessary to coagulation, and it equally excludes all such ideas as those of "ferment," "exciting or determining causes," "deposition of fibrin," &c. The study of the coagulation has unfortunately been conducted with pathological fluids which do not represent the normal state of things in the blood, but which are charged with products derived from the corpuscles. The pure liquid of the blood or lymph has no power to coagulate, nor does it contain those substances known as fibrinogen and fibrino-plastin, which are capable of being thrown down by solid salt and CO_2 from the state of solution in pathological fluids. I make this statement advisedly, after the most careful inquiry, and with a full appreciation of the skimming

[4] Text-book of Physiology (Bennett), pp. 60 and 208.

[5] Physiology and Pathology of the Blood, pp. 116 and 127, published by Smith, Elder, & Co. 1882.

[6] The formation of fibrin by the invisible cell-bodies of the youngest blood-corpuscles of the ovipara is no exception to this rule.

experiments of Hewson and Hunter, the filtration experiments of Müller, and the subsidence experiments of Schmidt. These methods are all imperfect, because they fail to get rid of the morphological elements. Perfect filtration of the blood not only deprives it of the power to coagulate, but also shows that it does not hold in solution those substratal substances on the union of which coagulation is supposed to depend. When the blood is shed the corpuscles of the "fugitive group" are variously affected. The primary lymph discs (so-called plates of Bizzozero) granulate like the white corpuscles; the advanced lymph discs and the invisible discs tend to form sheets of fibrin by fusion and liquid subsidence; while the discs with a slight tinge of colour, apparently because they are more viscous and extensible, give rise to fibrinous networks. This much it is necessary for me to state in order that my views may neither be misunderstood nor misinterpreted. I will shortly expose my facts and experiments on coagulation in detail to the criticism of contemporary workers.

I desire now to refer briefly to that part of Professor Legge's memoir which is concerned with his own observations and experiments, and which he believes to have a direct bearing on the points at issue between Professor Bizzozero and myself. In publishing his investigations the author states he had two objects in view. 1. To determine if there be or not an identity between the blood-plates of Bizzozero and the corpuscles of Norris. 2. To determine if the same plates exist in the blood of the oviparous vertebrates. To this end he first examined the blood of the triton and salamander, as it circulates in the margin of the tail, in a part in which, in consequence of the narrowness of the capillaries, the corpuscles are moving slowly. He states that the morphological forms which present themselves under these conditions can be reduced to three: First, the red corpuscles; second, the white corpuscles; third, a special form of morphological element which differs as much from the red corpuscles as from the white ones. "This last one," he says, "although with some slight modifications, seems to me to have a very striking analogy with the plates of Bizzozero, since they, although like the red corpuscles, appear oval or fusiform according as they present themselves in front or edgeways, are smaller than these, strictly colourless, having no visible trace of hæmoglobin." "In the circulating blood," he continues, "it is not possible to decide if these are nucleated or not. It is only possible to observe that they are sometimes homogeneous and smooth, while at other times they are covered with small rounded prominences, which give them a mulberry-like appearance. Very striking is the distinction from the white corpuscles, a distinction observable as much in the form as in the manner of circulating, inasmuch as while the white corpuscles in the interior of the vessels here and there stop against the walls, and emit more or less numerous protoplasmic prolongations, or are seen to circulate in the form of round globules, the elements under consideration always maintain their oval form and circulate freely amongst the red corpuscles in the axis of the blood current, without ever stopping, unless they be compelled to do so by the extraordinary narrowness of the vessel. As to their numbers, these elements are rather more numerous than the white corpuscles, but are less numerous than the red ones; as a rule, one of them is seen for every forty or fifty red corpuscles; occasionally they can be observed in small groups of four or five together." The author then proceeds to examine the same blood immediately after it is shed, and says: "The above described elongated, oval, and colourless forms may be still observed; they do not, like the white corpuscles, exhibit any amœboid movement, but show themselves with all the characters which individualise them in the circulating blood—i.e., their form remains elongated and oval, and their colour is like that of the white corpuscle, but a little paler. In form they are relatively more elongated and flattened than the red corpuscles; in construction homogeneous or slightly granular. Sometimes they contain a round nucleus, which, from unknown circumstances, is not always manifest. If we add methyl-violet to such blood the nuclei of the white and red corpuscles become rapidly coloured, but these elements do not become coloured, or only slowly, and with less intensity." The author then proceeds: "In addition to the above described elements, in smaller proportions, are observed corpuscles of an extreme pallor, and altogether homogeneous, which only reveal themselves by a line feebly refracting the light which surrounds them. In the interior circle included in this line the corpuscle does not present traces of structure, and has the same index of refraction as the added liquid. Following for a long time one of these corpuscles, I have seen the said circle always growing paler, until it disappears altogether from observation. From the above-named facts we may deduce that in the blood of the triton and salamander are to be met, in addition to the white and red corpuscles, two other elements, of which one seems to be, although with some modifications, analogous to the blood-plates of Bizzozero, and the other to the invisible corpuscle of Norris. However, whilst the first must be held truly as a normal constituent part of the blood, of the other the same cannot be said, because only the first is found in the circulating blood, whereas the other is altogether absent. Nor can the objection be made of its excessive delicacy, because when we are forewarned it is possible to observe a detail, however delicate. I hold on the contrary, as asserted by Bizzozero in his note, in answer to Norris concerning the invisible corpuscle described by the latter in the blood of mammalia, and also for the form which I have seen in the blood drawn from salamanders and tritons, we must think of a product of change of the red corpuscles. When we examine blood with all due precautions, then the corpuscle in question does not appear at all in the preparation; but when, on the contrary, an ordinary preparation is made, then it appears in greater or less numbers; in fact, if, instead of examining the blood which escapes abundantly from the wound, we examine blood touching with the object glass a smaller wound of the skin, then the said corpuscles are excessively numerous, and that because in this manner the blood becomes mixed with the water which moistens the skin of the animal ..... making preparations of blood by adding common water, we have the same results, but the preparation remains more demonstrative, because all the red corpuscles undergo the same change. They commence to lose the hæmoglobin, becoming therefore little by little so pale that their cellular body disappears completely from view, a circular or elliptical line alone remaining visible."

The author concludes his memoir as follows:—

"1. In the blood of tritons and salamanders, in addition to the white and red corpuscles, is a special morphological element, which, if it be not identical with, is at least analogous to the blood-plates of Bizzozero.

"2. In the preparations of the said blood are observed colourless discs which correspond to the description which Norris gives of his invisible corpuscles.

"3. These discs are the result of an alteration which the red corpuscles have undergone in the presence of water."

(To be concluded.)

ON SOME

DEFORMITIES OF THE BODY INCIDENT TO THE PERIOD OF GIRLHOOD.

BY CHAS ROBERTS, F.R.C.S.,

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I HOPE the time is not distant when a careful study of the living model of the child and the adult, and the whole period of the development of the one into the other, will form a part of the student's ordinary course of anatomy and physiology, as such knowledge is essential to the surgeon engaged in removing and preventing deformities of the body. Orthopædic surgery as a specialty is a great evil both to the profession and the public. The specialist who concentrates all his attention on a narrow field of study and practice is tempted to exaggerate its importance, and to analyse and disintegrate his facts till he loses sight of their relation to, and their dependence on, each other; while, on the other hand, the general practitioner is disheartened and repelled by the apparent complication of the subject, and is induced to hand over to the specialist many cases which he is quite competent to treat, or, as is too often the case, to undervalue the importance or deny the existence of many deformities. How else can we explain the difference in practice between the fussy mechanical ingenuity with which many professed orthopædists treat the slightest deformities of children—

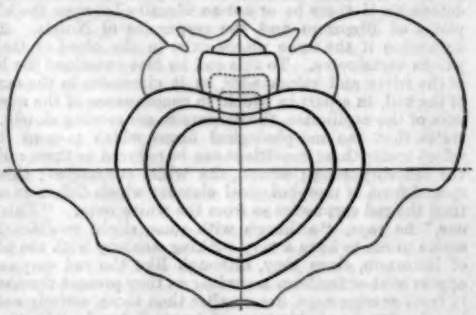
which, by the way, they often tell us are only visible to their specially trained eye, and are hidden from that of the family doctor,—and the *sangfroid* of the general practitioner who meets the difficulties by the administration of a few doses of steel and quinine and rest in the recumbent position?

No deformity of a child's body gives rise to so much alarm to parents, or is the subject of greater diver-ity of treatment among medical men, as lateral curvature of the spine, and this is due, I believe, to an imperfect acquaintance with its origin. Specialists are accustomed to treat lateral curvature, knock-knee, and flat-foot as distinct deformities, while in truth they are all links in the chain of one deformity. Lateral curvature may arise in different ways, but in all cases it is due to the loss of the lateral balance of the body in the upright position, and is the result of an effort of nature to maintain the centre of gravity of the body and support the head and shoulders in the position which requires the least expenditure of muscular effort. The paralysis, wasting or loss of a limb, or the shortening of one of the legs by disease of joint, rickets, knock-knee, or flat-foot in growing children, will produce lateral curvature, and these are its chief if not its only causes. It is not a deformity arising from general debility, and I do not think it can be produced, as is often asserted, by an awkward sitting position, as in writing and other school occupations. The curvature of the spine which results from these causes is antero-posterior, or what is commonly called round-shoulder (non-carious). The tendency of debility, whether local or general, is to bring the body into the prone or recumbent position, and not to tilt it on one side.

Setting aside the cases of lateral curvature in children who have been affected with rickets, disease of joints, paralysis or loss of a limb in early life, and which affect both sexes, and all ages equally, what may be called the idiopathic or acquired deformity is rarely found in children of either sex under the age of nine or ten years, and very rarely in boys above that age. It is, indeed, almost peculiar to girls verging on puberty, and is as often found in strong and healthy as in weak and delicately built girls, and most commonly in those who are too fat and heavy for their stature and age. It is a deformity which is less common among the labouring classes than among the rich and well-to-do, and is largely associated with a life of indolence and luxury.

A careful examination of the subject has satisfied me that this acquired lateral curvature in girls is due to the change in the position of the lower limbs resulting from the development of the pelvis from the infantile to the female type a year or two before the accession of puberty. Anyone who will examine the figures of young children below this age will find little differences between the two sexes. The legs of young girls are set on the body like those of boys, and, within the limits of their training and dress, they can run as well and as gracefully as boys; but as puberty approaches and the pelvis alters its shape, the heads of the femora are removed further from the centre of gravity, and at the same time become rotated forward by the widening of the pelvis, and especially of the outlet of the pelvis. The effect of these changes is to bring the knees closer together, and produce the weak-kneed condition and the awkward running gait peculiar to women. This condition of the limbs is well seen in pictures and statues of the nude figure, and it is often exaggerated by the artist or sculptor, probably to give a more distinct idea of a woman's helplessness or modesty. The knee-cap in women looks straight forward, while in men it is turned a little outward; and in women the knees touch, or even overlap each other, while in men they are quite free. In running, a woman has to move the knees round each other, and to throw the feet out in a succession of small semicircles, which accounts for the peculiarity in her gait. This gait is not found in young girls before the onset of puberty, and is useful as a diagnostic sign of pelvic evolution long before the ordinary signs appear.

Although this weak-kneed condition is quite normal, it is a fruitful source of deformity in growing girls. A little additional strain will convert it into knock-knee, and by throwing the weight of the body on the inner ankle, it will quickly break down the arch of the foot and produce flat-foot or complete eversion of one or both feet. It is here, indeed, that nearly all the mischief lies, for according to my experience ninety per cent. of the cases of lateral curvature of the spine in girls are associated with flat-foot. This deformity is exceedingly common among women, and a French *savant* recently quoted it as a proof of the physical inferiority of woman to man. To a slight extent flat-foot may exist in all women, as the position of the lower limbs after puberty would seem to produce it, and it may be nature's plan to promote what anthropologists call marriage by capture; but to a large extent, and in its worst forms, flat-foot is the result of civilisation. Indeed, both the highly arched instep and the everted foot are peculiar to civilised peoples, and are absent from the lower races, especially those who go barefoot, and both conditions owe their existence to the wasting of the muscles which flex the toes and foot by the constant use of tight-fitting shoes. In India, where the native workman makes use of his toes with almost the same facility as his fingers, the instep is obliterated by the fleshy bellies of the abductor of the great toe and the short flexor of the toes, which stretch across the arch from their attachment to the heel bone. The wasting of these muscles is of little importance to us who have no need to use our toes in detail; but it is far otherwise with the deep flexors of the foot and toes which are attached to the leg bones, and whose tendons pass under the ankle-joint and arch of the foot and form their chief support. It is, indeed, from the wasting or inaction of the deep flexor muscles, coupled with the turning out of the toes which fashion has imposed upon us, that the ankle and arch of the foot give way under the changed position of the



The diagram shows the relation of the brim of the pelvis in the child, at puberty, and in the adult female, from measurements of pelves in the museum of the Royal College of Surgeons. The want of parallelism of the two inner pelvic curves shows that in the change from the infantile to the female type evolution takes place chiefly behind, and that the legs must be rotated forwards and inwards. The dimensions are:—Child: breadth 83 mm.; length 73; index 114. Young female: breadth 112 mm.; length 85; index 132. Adult female: breadth 143 mm.; length 108; index 132. The indices of the young female and the adult are the same, but the bones of the former are not united together.

limbs in girls at puberty, which I have described; and what is remarkable, and not easily explained, the deformity generally occurs only in one foot, or is greater in one than the other. In this way, however, the legs become of unequal length, and we have obliquity of the pelvis, and consequently, lateral curvature of the spine to correct the balance of the body, and bring the head and shoulders into the line of the centre of gravity. Flat-foot also produces, or exaggerates, the natural disposition to knock-knee in girls, which, in its turn, adds to the inequality in the length of the two legs. Some observations recently made in America show that even in adults of both sexes the two legs are rarely of equal length, and there must be, therefore, slight lateral curvature in all persons, and it is probable that these natural curves become exaggerated, as in the development of round shoulder the large antero-posterior curves of the spine are exaggerated. It is to the wasting or non-development of the fleshy parts of the deep flexors of the toes or foot that Europeans owe the small ankle and the comparatively large calf of which they are so proud as distinguishing them from the lower races. It is a distinction, however, which is more than counterbalanced by the ugliness and inconvenience of flat-foot, to which it frequently gives rise. The ingenuity of an Edison could not devise a machine so favourable to the production of flat-foot as the tight-fitting, high-heeled, long-topped boot at present worn by girls. Not only does the rigidity of the front part cramp the action of the muscles, but the high heels place the foot at such an angle with the leg that the tendons are of least use in supporting the ankle-joint, and the long tops hamper the development of the muscles in the remainder of their course. The

high heels, moreover, push the centre of gravity forward on the arch of the foot, and by propping up the heel gives greater leverage, and a greater space for the arch to fall when once it gives way. In the majority of cases the mischief would stop when the arch reached the level of the natural heel, but the heels of boots favour a still greater fall, which ends in eversion of the foot. It is difficult to understand how women submit to the discomfort of wearing high-heeled boots, or can be so cruel as to let their daughters wear them. It is true they give a fictitious height to the body, and disguise the slighter forms of flat-foot, but on the other hand they exaggerate the severer forms, and the boots are entirely wanting in proportion. Zeising's law of proportion requires that the sole and the heel should have the relative length of three to two, like that of the normal foot.

In treating the deformities of the spine and legs incident to healthy girls, it is obvious that attention must be directed in the first instance to correcting the deformed knees and feet. The very first signs of the giving way of the arch of the foot, which is easily detected by examination, by growing pains, and especially a change of gait, should be met by the wearing of flat-soled, well-fitting boots, with indiarubber or felt pads inside to support the arch, and special exercises favourable to the development of the deep flexor muscles. At puberty, and for two or three years before, the growth is very vigorous, and in both stature and bulk girls shoot ahead of boys of the same age, the period of rapid growth of boys coming later. From ten to fourteen years the stature of girls increases at a uniform rate of two inches per year, except at thirteen, when it is two inches and a half, but the weight increases at a much greater rate. At ten years girls add 4 lb., at eleven 6 lb., at twelve 10 lb., at thirteen 12 lb., and at fourteen and fifteen 8 lb. to their weight, and this sudden addition to the weight tells rapidly on ankles, feet, and knees placed at a disadvantage by concurrent change in the position of the lower limbs by the evolution of the pelvis and the cramping of the muscles by tight boots. The arch of the foot often breaks down in the course of a few weeks, without warning or apparent cause, and in girls in perfect health, and especially those of an indolent habit. Fortunately the remedy is as easy and complete if applied promptly at the beginning and adhered to persistently, as it is difficult and unsatisfactory if put off till the deformity is firmly established. Support to the arch of the foot prevents the formation of knock-knee and lateral curvature of the spine. When it fails to do so, the knock-knee can be corrected by the temporary application of long splints, especially in bed at nights; but no apparatus is necessary for the curvature of the spine in its earlier stages, as it will disappear on restoring the lateral balance of the body, and all treatment will be useless until this is done. Much walking or standing should be avoided, and short but vigorous gymnastic exercises substituted, and when possible the recumbent position assumed. Sitting on the ground or on a sofa in the cross-legged oriental position serves to expand the pelvis, evert the knees and invert the ankles, and counteract all the deformities; while sitting on chairs with the legs crossed one over the other directly favours them. It is probable that most children spend too much of their time on their feet, and that their powers of walking is very much overrated. Running is the natural gait of all young animals, and children always run if left to play by themselves. The dire effect of standing and walking in producing flat-foot in children is shown by the following statistics, taken from my paper on "Flat-foot" in the St. George's Hospital Reports (1872-4): Of 10,000 children between the ages of eight and thirteen years which were examined, about one-third were school children living in country towns and agricultural districts, another third were school children living in manufacturing towns, and the remainder were factory children. Among the first, 17·1 cases per 1000 of flat-foot occurred; among the second, 30·7 cases per 1000; and among the third—i.e., the factory children, who were employed five hours' daily standing, walking, and carrying weights—79 cases per 1000 of flat feet were found. Among the latter the deformity was found to increase rapidly with age—i.e., with the longer period of employment in factories. Thus:—

Of the age of 8 years,	15·1	per 1000	had flat-foot.		
"	9	"	45·6	"	"
"	10	"	51·2	"	"
"	11	"	104·2	"	"
"	12	"	132·4	"	"

At the period when these observations were made (1873) children were allowed to commence work in factories at the age of eight years, instead of ten as now, and the low rate of 15·1 per 1000 represents the normal rate before the strain of labour has begun to tell on the children's feet.

There can be little doubt that children are made to stand and walk far too much both at home and at school. Standing at lessons, parade exercise, and much of the military drill in schools are injurious to both boys and girls, and especially to the latter. Instead of listless standing about, or taking long walks with adults, children should be permitted and encouraged to play lively games, which they will generally do even if left to themselves, to dance, and to perform short but spirited gymnastic exercises with apparatus. Exercises which develop the muscles of the feet and ankles, such as hopping and skipping, are especially necessary for girls; and still better than these are the admirable exercises preparatory to stage dancing taught at the National Training School for Dancing.[1] These exercises are directed to the development of the muscles and the free action of the joints of the lower limbs, and are far preferable to the languid movements of ordinary dancing. For the development of the muscles of the trunk and arms the excellent system of gymnastics for girls recently established by a lady[2] in various parts of London, with the approval, after careful and repeated inspection by myself, of Dr. Richardson, Mrs. Garret Anderson, and others, is all that can be desired. The Swedish and other exercises effected without apparatus are of little use, as idle and indolent girls who stand most in need of physical training easily comply with the form, but evade the spirit and hearty compliance which such systems demand. These systems lack motive to complete an exercise, while simple apparatus such as balls, dumb-bells, and bars compel it by keeping the end in view and giving an impetus to its performance. With half the care which mothers spend on dressing and decking-out their children, often in unsuitable clothing, they might, with a little help from their medical advisers, prevent most of the deformities which mar the physical beauty, comfort, and health of their offspring; and no time seems more appropriate than the present for directing the attention of medical practitioners, and through them of parents, to the means of attaining these objects, as the short walking dresses worn by women and girls at the present time reveal to all of us to what a great, indeed unexpected, extent the ugly deformities of the feet and ankles to which I have referred exist, especially among the well-to-do and higher classes.

THE PATHOLOGY OF HEPATIC TUMOURS.

BY WM. ROBT. SMITH, M.D., F.R.S. ED.

(Continued from p. 366, vol. i., 1882.)

MALIGNANT GROWTHS, WITH MICROSCOPICAL DEMONSTRATIONS.

(*a*) *Cancer.*—Cancer is found in the liver either as a primary growth or secondary to cancer elsewhere. For many years it was taught the primary variety was the most frequent, but now it is known that more than three-fourths of all cancerous growths in the liver are of metastatic origin, and of these metastatic deposits by far the larger number are secondary to primary cancer arising somewhere within the portal area.

There are two forms under which we meet with primary hepatic cancer—viz., first as a large solitary rounded tumour, and secondly as a diffuse degeneration of the entire organ, the liver meanwhile retaining its normal shape. When present as a solitary tumour, the growth is round and frequently of enormous size. Sooner or later it projects above the surface as an irregular prominence, over which the capsule becomes thickened and opaque. On section it appears as a soft pulpy growth of a greyish colour, from which a thick cream-like liquid exudes on pressure. It is seen to be traversed by glistening fibres varying in thickness; they have a reticulated arrangement, which gives the cut surface a lobulated appearance. In many places the external border is sharply defined, whilst in others the borderline between hepatic tissue on the one hand and cancerous growth on the other is indistinct or altogether wanting. As we should expect, the hepatic tissue and bile-ducts in the

1 Under the direction of Madame Katti Lanner.
2 Miss M. A. Chrulmsa, 69, Petherton-road, N.

neighbourhood are distinctly compressed, whilst some of the larger ducts are found blocked with cancerous masses; the portal and hepatic veins also contain cancerous thrombi, and are dilated. The mass may present certain varieties of retrogression—e.g., its centre may become converted into a dry yellowish cheese-like substance, owing to fatty changes in the cancer cells, or extravasations of blood show themselves as hæmorrhagic infarcts, which ultimately break down into dry hard masses, and, owing to the compression of the bile-ducts, the flow of bile is impeded and the organ becomes of a yellowish or greenish hue.

The diffuse or infiltrated variety of primary cancer is but rarely met with, but when observed is found to have a highly characteristic form. The liver is enlarged in all directions, the capsule thickened, and the surface covered with slight rounded elevations varying in size from that of a pea to a small nut. On section the lobules are seen to be enlarged, although their shape and outline are still preserved; but they are more or less transformed into cancerous matter. They are separated from each other by broad tendinous bands of fibrous tissue; they are either whitish in colour or yellow or green from the inhibition of bile, and are decidedly more succulent and pulpy than the ordinary hepatic tissue. The fibrous interlobular septa, owing to their vascularity, may have a tint varying from pink to bright red, which gives the organ a brilliant appearance. This variety of cancer, unlike the one just described, either undergoes no retrogressive change, or but slight fatty degeneration of its cells; the portal and hepatic veins and the bile-ducts are unaffected; whilst, as is also the case with the solitary growth, metastases to distant organs never occur, although the lymphatic glands found in the transverse fissure may in both cases be affected.

Microscopically, primary cancer presents the ordinary features of a medullary growth. It consists of large, round alveoli, the walls of which are composed of fibrous tissue and capillary bloodvessels, these latter being sometimes alone present. The alveoli are filled with cells which may have no particular shape or arrangement, at other times being cylindrical and symmetrically arranged. The capillaries derive their blood from the hepatic artery. These cancer cells are no doubt the direct offspring of the hepatic cells, although by some the epithelial cells of the smaller bile ducts are supposed to contribute in their formation. In both forms of the primary growth the cancerous transformation of the hepatic cells is the same, and may be studied in the various sections I have placed under the microscope. The true hepatic cells at first enlarge, by which the rows of cells become distinctly widened and separated from each other; at the same time the outline of the cells becomes very indistinct or altogether lost; the lobules then appear to be transformed into a number of protoplasmic masses, with a corresponding number of nuclei; these nuclei rapidly increase in number by the process of fission. This transformation of the hepatic cells is confined to a limited number of the rows of cells; the remainder, together with the capillaries, undergo atrophy from pressure; the portal capillaries, thus compressed together, with the connective tissue surrounding them, form the fibrous stroma of the growth; the capillaries which nourish the tumour are branches of the hepatic artery which have sprung into existence with the growth of the mass. It is, however, as a secondary metastatic growth that we have most frequently to deal with in cancer of the liver, the infecting source being generally the pyloric end of the stomach; it may likewise proceed from cancer of the intestines or peritoneum. If we reflect on the origin and distribution of the portal vein and lymphatics, we can readily understand with what ease the cancer germs may be transported. Secondary cancer of the liver appears nearly always as a number of deposits or nodes, and with extreme rarity as an infiltration.

The external appearance of a cancerous liver varies greatly. A number of milk-white nodules may protrude on the surface, which, on section, are found to vary in size from a millet seed to that of an orange, and to be sparingly scattered through a more or less atrophied parenchyma; or, on the other hand, the liver may be enormously enlarged, presenting superficially a number of umbilicated or centrally depressed nodules, being very much like a nux vomica seed, and about the size of an orange. The secondary hepatic growth increases so rapidly in size, and reveals to such a great extent retrogressive changes, that the primary infecting source is in danger of being overlooked, for very frequently the primary growth causes no very marked symptoms, and unless systematically looked for the actual site of origin of the lesion is often overlooked, for the secondary growth of the liver is so large that it readily obscures the primary and insignificant one of the pylorus. About five-sixths of all cancerous growths in the liver have a metastatic origin, and of these two-thirds are secondary to primary cancer in the portal area, and one-third to primary cancer elsewhere, being very rarely metastatic to cancer of the skin. There can be no doubt that these growths are due to the presence of cancerous emboli in the branches of the portal vein or hepatic artery. The nodes which are seen on section scattered throughout the liver substance vary much in number, size, and general character; they may be so small in size and so limited in number that they may escape suspicion during life, and be only accidentally discovered at the post-mortem. Generally, however, they are scattered irregularly throughout the organ, in numbers varying from two or three to fifty or sixty, or more, at the same time presenting the greatest differences both in size and shape—the size varying from minute granules imperceptible to the naked eye to that of an orange or cricket-ball, the average size being that of an egg or an orange, whilst the usual shape is globular. They are sharply circumscribed, but not encapsulated, and they cannot be easily detached from the liver substance, which is in immediate contact with their borders, although neither compressed nor altered in character. These nodes increase in size in one of two ways: they grow at their margins by progressively invading the healthy tissue, or they coalesce with smaller nodules in the immediate neighbourhood, but at the same time the central portions fall into a more or less rapid degeneration of the fatty, caseous, or calcareous variety, which is the cause of the characteristic cupping. In the unaffected parts of the liver there is usually great hyperæmia, which doubtless has something to do with the enormous enlargement of the organ which so commonly takes place; often, too, the liver appears intensely yellow from retention of bile in consequence of compression of the biliary ducts, but it is important to note that the liver substance seldom exhibits signs of compression, the foreign growth apparently taking the place of the normal tissue.

If we examine these nodes a little more closely we shall find that in all their essential details the characteristics of the infecting growths are repeated. On the surface they are usually of the scirrhous variety, more internally they are of the medullary type, a creamy juice exudes from the cut surface in variable quantity, which microscopically exhibits the ordinary appearances. On the surface we have already noticed that the growths rise at their edges, and if we trace them downwards we shall find them to be rounded masses lying in the liver substance, having stellate bands of fibrous tissue radiating out from it towards the surface. It is the contraction of these bands which causes the characteristic umbilication. A number of small yellow spots are visible in most growths which correspond to parts undergoing fatty degeneration. These retrogressive changes arise most rapidly in parts removed from the source of nutrition, which is at the periphery of the nodule; the centre, therefore, is most prone to be affected, the cells, of which the growth in great measure consists, undergoing fatty changes and resorption. The stroma may also participate in the degeneration. The absorption occurs only when the nodule is superficial, when the side towards the peritoneum can sink in and give rise to the phenomenon of umbilication. At this stage, if the growth be cut into, we find nothing but the cicatrix left after the removal of the cells. When the nodule is more deeply situated and surrounded on all sides by a stratum of uniform thickness and rigidity, cancerous abscesses are formed as a result of the degeneration (Geschwulstwand).

Another form of degeneration which these growths, more particularly the larger ones, undergo, is the cheesy variety. The cancer masses in this case become dry and hard, and the cut surface appears of a yellowish-grey tint; the cells and stroma both participate in the process; the vessels are destroyed; the whole mass being ultimately transformed into a finely granular detritus.

In the earliest stages of the disease the liver is seldom increased in size, or altered in form, although it contains a large number of cancer nodules of small size; however, as these become more numerous, and especially as they increase in size, the organ undergoes great alterations in shape, volume, and weight, becoming enlarged, much thickened, and enormously increased in weight; indeed, sometimes the liver weighs from 20 lb. to 25 lb. in such cases. On section

very little of the normal parenchyma is found to remain, which as a rule shows no morbid change or sign of compression; the branches of the portal vein are often found filled with cancerous emboli; they lose themselves in the nodules, thus rendering it very difficult to say with certainty whether the nodule is the result of the emboli found in the vessels, or whether the diseased condition of the vein is itself secondary to the cancer growth, unless indeed the small branches of the portal vein containing emboli are continuous with the gastric and portal veins arising in the vicinity of a cancerous growth of the pylorus, and they themselves contain emboli of a malignant character. The walls of the gall-bladder and the lymphatic glands lying in the portal fissure are likewise affected with cancer.

(To be concluded.)

SOME UNCOMMON SEQUELÆ OF DISEASES OF THE SKIN.

BY W. ALLAN JAMIESON, M.D., F.R.C.P.,
LECTURER ON DISEASES OF THE SKIN, EDINBURGH SCHOOL OF MEDICINE.

CUTANEOUS diseases, while presenting in general a somewhat uniform course as regards each particular disorder, exhibit at times certain peculiarities which may be due to the individual or to the locality affected, or to some special modifying circumstances. They are, however, also subject to sequelæ which may be regarded as rare. And to instances of these I wish to direct attention.

CASE 1. *Urticaria following Scabies in an Adult.*—A fresh-coloured healthy young man of twenty, who in the course of business had to travel much and sleep night after night in beds sometimes not of the cleanest, consulted me about an itchy eruption which had annoyed him for a couple of months. It began about the wrists, then spread to the thighs, arms, and shoulders. The lesions consisted chiefly of scratched papules and isolated vesicles. There was scarcely any irritation in the daytime, but it became most annoying when warm in bed at night. A brother who lived with him was similarly affected, and a physician in France whom he had consulted told him he had "gale." I ordered a warm bath and an ointment containing storax and balsam of Peru. Two months after he came back, and informed me that the eruption for which he had asked my advice had long disappeared, but ever since he had been troubled with a prickling and itching sensation, accompanied with the development of very evanescent wheals. These chiefly appeared on the thighs, where the scabies had been worst, and only when warm and in bed. There was nothing visible when I examined him, but he said a warm bath would immediately evoke them. He was directed to sleep lightly covered at night, to avoid warm baths or any stimulants to the skin, and to sponge the body before retiring at night with a lotion containing carbolic and prussic acids, spirit of camphor, and a little glycerine. I heard no more of him, so I assume this relieved him.

Mr. Hutchinson has made us familiar with the various itchy eruptions which children are liable to as a sequence of the bites of insects, of scabies, and of varicella; but it is seldom irritation of such persistence follows scabies in a healthy adult, more particularly when an ointment so slightly irritating is employed for the destruction of the acarus. The following may be regarded either as an accident of the eruption or as a consequence of it.

CASE 2. *Enlargement of the Inguinal Glands following Zoster Abdominalis.*—A young man of a rather lymphatic temperament, engaged as a law clerk, consulted me about a painful swelling in his left groin. The inguinal glands were found to be much swollen, tender, and painful. There was no gonorrhœa or chancre or history of either, but on examining the flank a group of vesicles on a hyperæmic base was found just above the crest of the ilium, and another nearer the spine and higher up. His bowels were habitually costive, and he accounted for the glandular enlargement by straining at stool; the presence of the patches of herpes zoster afforded, however, a much more rational explanation. He was directed to paint the patches of vesicles with flexible collodion, and to take some compound liquorice powder as an aperient. I have not observed any notice of glandular enlargement as a sequence of the eruption of zoster, and cannot recall a case in which any complaint was made of it. Such an occurrence would seem therefore to be rare, while the situation would without further examination have raised, as it did to me at first, a suspicion of gonorrhœa. When one considers how much inflammation in the skin is sometimes produced in zoster, it is certainly rather surprising that sympathetic adenitis does not happen often.

CASE 3. *Keloid after one Erasion with the Sharp Spoon.*—About a year ago Mr. Chiene asked me to see with him a young female, aged twenty-six, who had a curious black mark on her shoulder, just above the spine of the right scapula. This spot had existed as long as she could remember. When ten years old it was, she said, about the size of a threepenny piece. Of late it had grown larger, and had reached the size of half a crown. At its upper part it was of a deep bluish-black, and well defined from the surrounding skin. At the lower part was an outlying ring, reddish-brown in tint; and between these limits was an area little altered from normal in hue. Though apparently not elevated above the surface, when the fingers were passed over it little shot-like bodies could be felt rolling beneath them. The affection was quite superficial, and involved little more than the rete mucosum. The cuticle over it was shiny, thin, and as if loosely attached, and was wrinkled vertically in fine lines. It itched at times, and was painful when dragged but not when pressed. The patient is stoutish, with a fair skin, has had slight hæmoptysis, and suffers from bronchitis every winter. She is easily fatigued. Bowels rather constipated. Menses regular, but scanty. I attacked the growth with the sharp spoon, and though the resistance was considerable most of the mark was removed, some pigment which obstinately refused to be separated still remaining. The part was then dressed with absorbent cotton, and afterwards, till healed, with boracic lint and lotion. Professor D. J. Hamilton examined the scraping for me, and found it was a blood-clot under the epidermis. So perfectly had the encysted blood been preserved that the cells were distinct, and probably because they had not broken down had consequently not undergone absorption. More than six months after she came back, and on looking at the part which had been scraped I found that a nodule of keloid had become developed in it. It was about one-third of an inch in diameter, of a square shape, and reddish-pink in colour. It was both rather tender to touch and smarted a little spontaneously. I directed it to be painted with a solution of iodoform in flexible collodion, but this a couple of months after had done no good. It was quite unchanged. Erasion when employed for the removal of a new growth, such as lupus or epithelioma, seems to have no tendency to occasion that disease of scars which we know as keloid. Here, however, there was no new formation, and it may have acted as repeated multiple scarification has been found to do in nævus, and set up an irritation in the corium which eventually took the form of keloid. The singular point is that only one erasion was done, and yet keloid grew in the cicatrix.

CASE 4. *Pruriginous Eruption as a Sequela of Psoriasis, and possibly Scabies also.*—A healthy-looking man, about thirty-six years of age, consulted me in March last. He had then well-marked patches of psoriasis on his back, abdomen, arms, legs, and head. These bore few scales, as he had been taking arsenic. Though he has suffered from the disease for some time, it went nearly entirely away last summer and winter, to return this spring. The psoriasis itself was more than usually itchy, but, besides this, there were small and discrete papules on the flexor aspect of the wrist, and a vesico-pustular eruption on the penis. These parts were specially irritable at night. On the head, great part of which was bald, the spots of psoriasis were erythematous maculæ, and not itchy. He was directed to take a warm bath, and then apply an ointment of storax and balsam of Peru to the body, and one of rufigallic acid (one in ten) to the head. One-fiftieth of a grain of arsenious acid in pill was prescribed to be taken three times a day. The itching was relieved, but not cured by the use of the storax ointment, and the arsenic was gradually increased to the one-twentieth of a grain thrice a day. At the end of April he went to a hydropathic establishment, where he continued to improve as regarded his psoriasis. When seen in the middle of July the psoriasis had disappeared, but the skin of his hands was uniformly rough and dry. Inside the thumbs and between the thumbs and forefinger, as well as between the fingers themselves and on the knuckles, the surface was warty in character, not unlike the verruca necrogenica of Wilks. Over the whole of the arms, trunk,

abdomen, and back were deep crimson-red papules, intensely itchy, and many of them torn and scratched. Though most of these papules were seated at hair-follicles, they had neither the appearance nor the arrangement of those of lichen ruber. They were not set in lines nor aggregated into patches, nor had they the peculiar horny glance which characterises those of lichen. While very itchy at night, they gave comparatively little annoyance in the daytime, but his rest was broken and his life rendered miserable. His appetite had not failed, though he felt somewhat languid, and unable for prolonged exertion. I ordered him a nightly bath at a temperature of 90°, containing two ounces of sulphide of potassium in each bath; and after the bath to be painted with a lotion containing carbolic acid and glycerine; for the hands inunction with glycerine of starch, and twenty drops of tincture of gelseminum as an antipruritic at bedtime. A week afterwards he wrote to me saying that he was much relieved. He could now sleep the greater part of the night with comfort. He found the lotion cooling and pleasant, and his hands were softer, and the skin more pliant. I recommended continuance of the same treatment, simply adding some spirit of camphor to the lotion. Ten days more elapsed, and then he wrote to me that his hands were nearly well, and except his arms, which still rather rebelled, his body also was almost cured. I permitted the discontinuance of the sulphur bath in the meantime, the resumption of the morning cold tub, with inunction with glycerine of starch afterwards. I have not since heard from him.

Psoriasis seldom itself itches much when uncomplicated; and a pruriginous eruption like this developing out of it must be regarded as uncommon. In some respects it seems analogous to what Dr. Tilbury Fox described as pityriasis pilaris, which occasionally follows pityriasis rubra. But the colour constitutes a difference. The influence sulphur baths had in allaying the itching would seem to bring it into relation with Hebra's prurigo; and, indeed, the general aspect of the eruption resembles nothing so much as the plate of prurigo in Fox's Atlas. Now that dermatology is becoming better known, and day by day is being based on more secure ground, the manifestation of peculiar sequalæ in certain cases will assume due importance and attract greater interest. These cases may serve to direct attention to a new and unexplored field.

CASE OF INGUINAL AND FEMORAL HERNIA OCCURRING ON THE SAME SIDE OF THE BODY.

BY J. M. COTTERILL, M.B. EDIN., F.R.C.S.E.

THE subject of hernia is one full of interest to the surgeon; and this is mainly due to the fact that not only does considerable difficulty occasionally present itself in making an exact diagnosis, but that we so frequently meet with complications of widely different natures, such as inflammation, adhesions, strangulation, hydrocele, malposition of the testicle, and the like, giving rise in their turn to various symptoms and risks to the patient, and calling for a careful consideration and treatment of each case on its particular merits. In illustration of this statement the following case may be of some interest.

On June 15th, 1882, I was asked to see Mrs. G——, aged sixty-four, who was reported to be suffering from severe pain in the abdomen, persistent vomiting, constipation, and other symptoms of intestinal obstruction. The history of the case was, that eight days previously to my seeing the patient vomiting and constipation had set in, and, in spite of the adoption of the usual lay treatment in such emergencies, she had grown steadily worse, the abdomen becoming somewhat tense and very painful, and the vomiting after the fifth day of the illness becoming slightly fæcal in odour and appearance. Getting alarmed at her condition, she sent for medical advice, and the gentleman who saw her, recognising her symptoms as those likely to be due to strangulated hernia, and, on examination, finding an inguinal hernia in her right groin, reduced it without difficulty, and left his patient, as he hoped, in a fair way to recovery. The following day, however, she was considerably worse, and symptoms of collapse so rapidly set in that at noon she was fast sinking, and by the time I reached her house at two o'clock she had died.

I had an opportunity of carefully examining the body after death, and found that the hernia, which had been reduced over-night, and which was of the direct inguinal variety, had again protruded, owing no doubt to the constant vomiting; but it was easily capable of reduction, and it turned out on inquiry that the patient had suffered from this reducible hernia for some forty years past. At first I naturally suspected that this hernia had become strangulated, and had been reduced *en bloc*; but on making a more careful examination I discovered a small femoral hernia on the same side of the body, which had escaped previous notice from its comparatively small size and from the great development of superficial fat over the patient's body. This femoral hernia was about the size of a walnut, tense and irreducible, and there seemed every indication that it had been the cause of death. It seems strange that it had not attracted the notice of the patient, but she had made no complaint of it, and seemed to have been unaware of its presence, referring the pain and other symptoms to the inguinal hernia lying close above it. As no medical advice was sought until two days before death, when, judging from the symptoms, gangrene of the gut and peritonitis had supervened, it is not probable, even if the exact nature of the case had been then recognised and herniotomy performed, that the case would have terminated satisfactorily.

The comparatively rare occurrence of two forms of hernia on one side of the body, and the fact that one of these, apparently the fatal one in this instance, had been overlooked, seem to render this case deserving of record.

Edinburgh.

THE INTRA-VENOUS INJECTION OF FLUID FOR SEVERE HÆMORRHAGE.

BY C. EGERTON JENNINGS, L.R.C.P. LOND.,
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ON August 20th, at about 3 P.M., M. A. S——, a patient of the London Hospital Maternity Charity, pregnant, and nearly at term, fell in the courtyard adjoining her house, suddenly becoming the subject of profuse ante-partum hæmorrhage. At 5 P.M. I found her collapsed to a marked extent, lying on a sofa in her bedroom, the pulse barely perceptible, the skin cold and clammy, extreme pallor of the face, an anxious expression of countenance, sighing respiration, and slight jactitation. Blood was flowing from the vagina; the mucous membranes were blanched. Upon examination, I found the os uteri fairly dilated, the right shoulder presenting; the membranes were unruptured, and the edge of the placenta could be felt just within the os uteri posteriorly.

At this critical juncture I remembered the cardinal rules laid down very clearly by Dr. Palfrey in his lectures on Obstetric Medicine for the management of cases of this description—viz., to arrest hæmorrhage, to correct the malpresentation with the least possible shock, and, by cautiously employing stimulants and restoratives freely, to allow the patient to rally and deliver herself spontaneously. A drachm of brandy with one of water was injected into the gluteal muscles; the membranes were ruptured, and the left leg brought down into the vagina with considerable ease, owing to the flaccid condition of the parts and the amount of general anæsthesia present. The abdomen was kneaded, the hæmorrhage ceasing. To have accelerated delivery at this period would, I think, have proved fatal. Two grains of sclerotic acid, in solution, were injected into the buttock, and the woman was covered up with blankets. I left an assistant steadily kneading the uterus, and returned to the hospital for a transfusion apparatus. Not being able to procure a blood-giver, it was determined to try a saline alcoholic intra-venous injection.

I may observe parenthetically that great difficulty was experienced in finding a vein, owing to the profound anæmia existing. The patient's right elbow was immersed in hot water, and the cubital triangle thoroughly sponged. These means, added to friction of the part and the adaptation of a

turn of a bandage around the arm, were successful in causing the veins to stand out with some prominence; an incision was made over the median basilic, the vein exposed, isolated, and an aneurism-needle armed with a double ligature passed beneath it. The distal ligature was tied, the vein opened, the nozzle of a three-ounce metal syringe, charged with the fluid already prepared, inserted; the proximal ligature tied loosely over the nozzle of the syringe, and the piston pressed slowly home. This was about 6 P.M., the woman being moribund. The syringe was emptied; it was disconnected, refilled and readjusted, the process being continued till sixteen ounces of fluid had been injected. Signs of animation very rapidly appeared—recognition of people present, speech, vision and hearing returned, and complaints of pain in the abdominal region were made. The syringe was withdrawn, the proximal ligature on the vein now tied tightly, the wound closed with the interrupted suture, and a compress and bandage applied. Another grain of sclerotic acid was injected hypodermically and the case left to nature, delivery occurring at about 7.30 P.M., without any further operative interference whatever.

I may add that the saline alcoholic solution, employed in this case, consisted of twenty ounces of water at about 100° F., into which was stirred a powder containing exactly the following ingredients:—Chloride of sodium, fifty grains; chloride of potassium, three grains; sulphate of soda, and carbonate of soda, of each 2·5 grains; phosphate of soda ($Na_2 PO_4$), two grains. To the fluid thus prepared two drachms of absolute alcohol were added. The subsequent progress of the patient has been most favourable. The highest temperature (Aug. 23rd) noted since delivery was 102·4° F.; the wound at the elbow healed kindly, and the woman has proceeded to an uninterrupted convalescence.

I believe I am correct in asserting that transfusion is commonly regarded as a theoretical rather than a practical operation—as one to be performed in the theatre of a hospital, but not in the country village or wayside house. With the view of facilitating the method of intra-venous injection, Messrs. Maw, Son, and Thompson, have made for me a small case containing a few feet of elastic tubing, to be used after the principle of a nasal douche or syphon, cannulæ of different sizes, a pair of dissecting forceps, with fine points, a scalpel, an aneurism-needle and ligatures, a graduated bottle for alcohol, and room for some saline powders. Here, within very small compass, the accoucheur has the means, with the addition of a jug of hot water, of combating very speedily the effects of alarming hæmorrhage. This is, I submit, a more practical method than the transfusion of blood; here no blood-donor is required, and no risk—it may be urged a trifling risk—to a healthy life incurred.

EXCISION OF THE LATERAL HALF OF THE TONGUE BY WHITEHEAD'S METHOD.

BY BENNETT MAY, B.S., &c.,
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AT the present time, when the subject of excision of the tongue in cancer is somewhat prominent, I feel called upon to make a short record of the following case, which terminated fatally.

J. T——, aged forty-four years, became an inmate of the Queen's Hospital on January 21st, 1882. He was suffering from an epithelioma of the right margin of the tongue, appearing as a foul ulcer about an inch and a half in length, and parallel to the long axis of the organ. It extended back to within a quarter of an inch of the palato-glossal fold, but was not infiltrated beyond its immediate base. The history pointed markedly to a local causation—viz., the ragged edges of a row of stumps, which after many months' irritation were extracted too late to arrest the progress of the disease. Under the angle of the jaw was a single glandular swelling the size of a pigeon's egg, slightly tender, but movable and circumscribed; it had come up suddenly within three weeks of his admission, and was thought to be subsiding at that time. He was otherwise in fair health.

Operation.—The patient, placed in a dentist's chair, was brought under ether, and the frænum divided with curved scissors to give more room in the mouth. The tongue was then transfixed with the bistoury, and split into lateral halves by cutting forwards. The scissors were used to sever the mucous membrane along the floor of the mouth, the palato-glossal fold, and finally the right half of the organ was severed on the level of the lower border of the maxilla. Bleeding was free, and required prompt attention for its arrest. It followed every cut, but it was not till the final severance that it welled in profusion from the ranine artery in the floor of the mouth. I did not interrupt the proceeding long to attempt to arrest it in detail, with the exception of securing a vessel in either half which had been severed during the splitting. The vessels were exposed by traction on the sound half of the tongue, and were secured by gut ligatures without much difficulty. The gland was then removed through an incision over it, beneath the angle of the jaw, whilst it was made prominent in the neck by a finger in the mouth. Being a salivary gland, it easily shelled out until it held only by a small tag of tissue, which rather unfortunately was touched with the scalpel instead of being torn off, for a small vessel was severed, and continued to bleed into the mouth, the floor of which had been penetrated. This bleeding was more difficult to arrest than that from the tongue, and the wound had to be thoroughly everted before the little point could be found. The resulting wound, however, which extended from the back of the floor of the mouth to beneath the angle of the jaw, afforded an excellent line of drainage, and a tube was retained there for the purpose. Every precaution was taken in the after-treatment, as described in THE LANCET of June 10th. On the third day I thought he was out of danger, for he had rallied well from the operation, was free from fetor of the breath, and with excellent drainage through a tube below the jaw. On the fourth day the pulse and temperature went up, and he began to cough purulent mucus from the trachea. There did not seem enough mischief in the chest, however, to account for his serious illness. On the same day, after thoroughly irrigating the mouth, I let him have a little milk to drink, and soon afterwards he was seized with pain in the abdomen, followed by diarrhœa and hæmorrhage from the bowels. These continued unchecked till the eighth day, when his death took place rather suddenly after intestinal bleeding. No post-mortem was permitted, but the cause of death is believed to have been gastro-enteritis and purulent bronchitis.

The principal point of interest in the case is that of hæmorrhage from the mode of operation, and its bearing on the fatal result. Although free, the bleeding was controllable, and was arrested by promptly securing three or four vessels. I cannot say that none entered the air-passages, though the operation was not embarrassed by this cause. It was not formidable or dangerous *per se*, further than it may have opened the way, as it does so fearfully in these cases, to other complications, such as admission of blood to the lungs and the ready onset of septic infection. Having only to remove one-half of the organ, I was at great ease and advantage in securing the vessels by traction on the sound portion, but if the other half had required removal I should not expect to have fared so well. I felt this at the time. There would not have been the same facility in exposing the bleeding vessels. For the same reason, after the first splitting of the organ, I made very little delay to arrest bleeding in detail. I found more loss than gain by this, the severance of one-half being effected very quickly, and there being no profuse bleeding till the final cuts. I have seen nearly as much bleeding follow the use of the écraseur, and without the great advantage of being securely arrested before the patient left the operating-table, as was the case with this patient. I do not wish in any way to associate the fatal issue with the special method of operating. I hardly know why death should have occurred, or how far the hæmorrhage of the operation may have contributed to the fatal result; certainly the gland was as much to blame as the tongue. Nor do I wish to disparage the operation on such limited experience. But it appears to me that Mr. Whitehead underrates the amount of bleeding which may at times be encountered The operation is easy of performance and rapid in execution, and in his hands has yielded excellent results, whilst his rules for after-treatment are most valuable. In the meanwhile the possibility of having to encounter such a case as that of Mr. Treves (THE LANCET, April 22nd), although doubtless exceptional, and my experience in this one, will deter me from resorting to a cutting operation with-

out adopting Billroth's preliminary step of securing the lingual arteries. Any operation, to be satisfactory, should provide against the admission of blood into the air-passages, and should also secure subsequent drainage below the jaw, and my own experience leads me to believe that these desiderata can be most surely attained by an operation which includes division of the lower jaw whenever the entire organ is to be removed.

EXCISION OF THE ENTIRE TONGUE BY WHITEHEAD'S METHOD.

BY ANDREW MARSHALL, M.D.

A FEW months ago a brief report was published in the columns of THE LANCET of a case of excision of the entire tongue performed by me according to Mr. Walter Whitehead's method, in which there was an entire absence of the difficulties and dangers which some surgeons have experienced in the course of this operation. The process was found to be easy and expeditious, the amount of blood lost quite insignificant, and the result satisfactory. Another similar case has lately occurred in my practice which has tended to confirm in my mind the favourable opinion of the operation which I formerly expressed.

W. D——, aged forty-eight, by occupation a wheel-smith, living in Preston, and suffering from cancer of the tongue, was first seen by me on July 22nd, in consultation with Dr. Lightbourne. The disease at that time involved nearly the whole tongue, excepting the anterior third. It was worst on the left side, where there were much enlargement, induration, and ulceration. There also the tongue was partly bound down by infiltration of the subjacent tissues; and attempted movements by the patient, or manipulation by others, produced extreme pain.

The man was evidently a great sufferer, exhibiting in a marked degree the usual symptoms of his distressing complaint—viz., constant pain, aggravated by talking, masticating and swallowing, great fetor of the breath, and profuse salivation. The disease had been in existence for several months. It was first noticed as an indurated spot on the left side. No cause could be ascribed for the existence of the malady. There were no sharp teeth to account for it. The patient had been a temperate man, was not a smoker, and said he never had syphilis. There was no history of cancer in the family so far as could be ascertained. We advised removal of the whole tongue, considering it expedient as a palliative measure, although of course not likely to result in anything better. It should be stated that Dr. Lightbourne had previously given him the same advice, which, however, he then declined. After a few days' consideration he gave his consent, and the operation was performed on July 28th. Mr. Whitehead's directions were strictly followed, and surely that is necessary if a fair estimate is to be formed of his operation. After the first few snips with the scissors, blood began to flow rather freely, but the prompt application of small sponges not only prevented any reflux of the blood into the air-passages, but also speedily arrested the flow sufficiently to allow the operation to be safely proceeded with. Bleeding took place from the right lingual only, and pressure with the finger sufficed to stop it; the left lingual was never seen. The later stages of the operation were accompanied by very little hæmorrhage, and after its completion there was hardly any at all. Altogether there was not much, probably from two to four ounces, and there was no difficulty whatever in controlling it.

There was nothing specially noteworthy in the after-treatment. No food was given by the mouth for three days. Antiseptic washes and inhalations were used. Great relief from pain followed the operation and a good recovery was made, but of course the benefit is only temporary, a cure under the circumstances being impossible.

A difference of opinion still exists amongst surgeons as to the relative merits of Mr. Whitehead's operation, but this difference refers principally, or perhaps solely, to the danger from hæmorrhage, it being very generally admitted that "if the question of probable bleeding be put aside the operation would be in every way excellent. By its means the tongue can be removed entire, with ease, precision, and rapidity; the neighbouring parts are but little disturbed, and all the evils incident to the crushing or bruising of tissues (as involved in the use of écraseurs) are avoided." With regard to hæmorrhage, Mr. Whitehead asserts that it "is easily controllable and usually trifling." Some operators have not found it to be so, however, for cases have been recorded in which the hæmorrhage was "very profuse" and even "terrific." It does seem desirable therefore to obtain an "accumulation of cases from different sources" in order to determine the real extent of this danger, and to discover, if possible, the true explanation of the "conflicting statements" which have been put forward with regard to this subject.

Preston.

ON TWO CASES OF HEPATIC ABSCESS; RECOVERY.

BY F. C. BARKER, M.D., F.R.C.S.I.,
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CASE 1.—D. S——, aged about twenty-five years. Admitted to Surat Civil Hospital August 13th, 1877. Liver enlarged to about a handbreadth below costal margins, and upwards to an inch below nipple. Tenderness and loss of appetite. Attack began ten days ago. No pain in shoulder. Temperature normal. Given twenty-five grains of ipecacuanha. No emesis followed.—Aug. 14th: Severe hepatic pain. Slight fever in the night with "cold" (rigor?) reported. Tongue slightly furred. Given a calomel and jalap purge.—19th: A distinct fluctuation in right hypochondrium, with fulness here and in the chest above, and obliteration of the intercostal depressions with great tenderness. Tapped in hypochondrium with aspirator and No. 2 needle; twelve ounces of reddish-brown fluid, abounding in hepatic cells, drawn off from a cavity evidently large, judging from the free movements of the needle without encountering the opposite walls. Allowed two ounces of country spirit daily as he was reported an habitual drinker. Ordered thirty grains of chloride of ammonium three times a day.—22nd: Partial relief to symptoms since tapping, but swelling returning. Temperature 100°. Chloroform given and an incision made close to puncture of 19th, about an inch and a half long, passing through the rectus, which was torn through with a director, down to its posterior sheath. Dry lint into wound and poultice.—23rd: Abdomen ascitic and feet slightly œdematous.—26th: As no bursting had taken place into the wound a finger was introduced, and the remaining covering of the abscess divided with a scalpel, on which about forty ounces, chiefly pus, flowed, a small quantity of bile-tinged fluid following. Drainage-tube introduced, and carbolic oiled lint pad applied. Abdomen and lower part of chest firmly bandaged. Ordered egg mixture.—27th: Abdomen reduced in size. No fluctuation. Discharge about two ounces. Pulse 76; temperature normal.—28th: Pulse 97. Abscess admitted a probe five inches backwards. Discharge less. Pressure steadily kept up on abdomen during dressing. Skin generally becoming dirtier and looser.—29th: A great falling in of abdomen has occurred from pressure of the bandages. Discharge in great measure bilious.—30th: Pulse 100. Discharge still bilious.—31st: Same. Abdominal bandages slackened. Costive. Castor oil.

Sept. 2nd: Stools free and well tinged with bile, contrasting stongly with their previous clayey colour; bile apparently diverted from abscess to bowel. Its reappearance in the motions and disappearance from the abscess allayed fears of injury to the gall-bladder or ducts. Lateral space in abscess lessening; bandage a little tighter.—3rd: Pulse 97. Discharge nearly free from bile, purulent, rather thin.—4th: Pulse 91. Thermometer in abscess showed 99·8°.—7th: Daily discharge now about three or four ounces.—9th: Discharged a piece of thin membrane about two inches square, tinged with bile.—23rd: Rupial eruption on back of hand.

Oct. 4th to 10th: Discharge much less. A small sore on glans penis and a general ulcerative eruption covering the body by the 10th, with increase of discharge from abscess to about an ounce.—19th: A great decrease in discharge since the 13th, on which iodide of potassium was increased. Crusts of eruption separating.—28th: Drainage-tube discontinued. Improvement uninterrupted from this date.

Nov. 10th: Abscess scabbed over; health good; become fat. Discharged.

The total amount of discharge during treatment was calculated at over four pints and a half, including that at tappings.

Treatment (essentially) after incision of abscess:—Stimulants; alimentation; cod-liver oil; iron; quinine; nitro-muriatic acid; frictions of cod-liver oil and iodide of potassium on appearance of syphilitic eruption, which, under its use, disappeared as promptly as it had supervened severely, and in evident connexion with the persisting suppurative tendency in the liver.

CASE 2.—Mr. G——, aged thirty-nine, tall, sanguine temperament and spare active frame, and remarkable powers of recovery from repeated illnesses, having had several attacks of liver congestion, or inflammation more or less acute, and once evidently connected with malarious fever, and on subsidence of which the liver got well. On July 23rd, 1879, two days after hard racquets, followed by iced drinks and while out of practice, he was seized with lancinating pain in right and left hypochondria, which became more intense next day. Purgatives for costiveness having partially acted, opium gave temporary relief, but the temperature rose and remained so, with evening remissions till the 31st, when a sudden fall of three and a half degrees, with a profuse perspiration, accompanied the discovery of a deep-seated tender induration in the epigastrium, two and a half inches in diameter. No fluctuation. This was found, however, on August 5th, and on the 8th became so superficial that puncture was practised with a large trocar and cannula after a short cutaneous incision, and a grooved needle exploration gave exit to a drop of pus. About an ounce of healthy pus mixed with blood afterwards escaped. On this ceasing a carbolic oiled strip of lint was inserted through the cannula, and poultices kept on. Subsequent daily discharge very slight, and relief marked, temperature remaining at 98·4° and 99°, till the 17th, and a previous severe hæmorrhagic and dysenteric purging at once and finally ceasing. The discharge, however, continued of a disappointing character, scanty and reddish; pulse, though only from 62 to 77, laboured and unrhythmical; temperature showing the slight evening rise to 99°; slight headache and disturbed sleep, with bad dreams. On the 18th a return of enlargement round site of abscess; temperature rose to 101·6°. Leeches, fourteen over liver and four to anus; milk diet.—19th: Slight fall of temperature; leeches, six and four.—20th: Further fall to 99·4°; leeches, eight and two.—21st: Further fall to 99·6°; leeches, twelve over liver.—22nd: Further fall to 98·4°, and evening 99°. From this date convalescence progressed, and he departed, by sea, for Bombay, where, under appropriate treatment, comprising blisters, iodine painting, chloride of ammonium, nitro-muriatic acid, nux vomica, Carlsbad salts, and no stimulants for a time, the small remaining sinus healed, and his general health was restored. On inspecting him again, at Rutnagiri on November 15th, I found him doing well and engaged in hard official work, with which he was occupied till his departure for Europe in May last.

Remarks.—In THE LANCET, Dec. 21st, 1878, p. 871, Surgeon-Major Furnell, speaking of the aspirator, says: "The abscess is tapped again and again with relief." This is precisely what promised to occur in my Case 1, and appears, as Dr. Furnell says, an inevitable consequence of the use of the aspirator in all large abscesses. The liver must have something to fill the vacuum, and the readiest things are pus, blood, or liver tissue. A week after the aspirator drew twelve ounces the scalpel incision gave vent to forty ounces. No further operation was required. But in this case, I think, immense benefit was derived, and for obvious mechanical reasons, from the firm abdominal bandaging. Here was an equable pressure aiding contraction from without, and in no way conducing to internal breech of surface, like the suction force of an aspirator.

Since reading Dr. Furnell's cases and remarks, I should certainly prefer (to even the small piece of drainage-tube I used) the oiled lint strip, as less interfering with nature while sufficiently keeping open a way of exit for discharge. It answered well in Case 2, introduced through the canuula as he advised.

In Case 1, a severe syphilitic taint, declared by the rupia, warranted every possible blood-restoring and supporting measure whose good effects, coupled with the iodide, were shown by the progress of the case; whereas in Case 2 a directly opposite line of treatment was as clearly indicated by the sanguine temperament and purely phlegmonous character of the abscess, and that which answered best was found to consist of leeches, low diet, no stimulants, and repeated doses of castor oil.

Dr. Furnell's directions for the preliminary incision should be paid special attention to. The grasp of the skin and underlying tissues on a large trocar with an incision insufficient in length and depth, is such as to necessitate a degree of force in its introduction which might be dangerous in a thin-walled abscess, and in any case gives a needless shock.

Warrenpoint, County Down.

NOTE ON THE

TREATMENT OF CONTRACTED FINGERS.

By EDWARD BELLAMY, F.R.C.S.,
FELLOW OF KING'S COLLEGE, LONDON.

A POWERFUL man some months ago scratched his little finger with a meat-bone. The usual train of symptoms followed, and when I saw him the tip of the little finger was so tightly approximated to the palm that no force could separate it, and strong fibrous bands corresponding with the primary flexures were readily observed, and as I thought the tendon was uninvolved, and still ran in a tolerably free theca, I divided the bands with a von Graefe's iridectomy knife, which is singularly useful for fine plastic work, and extended the fingers forcibly. No good came of this proceeding. I subsequently placed him under an anæsthetic, and carefully and thoroughly extirpated the entire cicatricial tissues, and divided the tendon, with antiseptic precautions. The finger was carefully retained in the straight position, a metal circlet was made for the wrist, and a piece of stout steel clock-spring welded on to it. This steel spring was carried up the dorsum of the finger and suitably attached to it. By its tension it effectually kept the parts on the stretch, and when the wound had healed, passive and active movements, conducted by the patient himself, brought about an excellent result. The finger is as straight as the others, and will be, no doubt, ultimately quite as useful.

Wimpole-street.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

CASE OF TUMOUR OF BLADDER; DIGITAL EXPLORATION THROUGH MEDIAN INCISION; REMOVAL OF GROWTH.

(Under the care of Mr. JOHN H. MORGAN.)

FOR the following notes we are indebted to Mr. W. H. Colman.

Edward J——, a labourer from Great Wakering, Essex, aged sixty-five, was admitted to the hospital at the beginning of the year, under the care of Mr. Bellamy. He stated that about fifteen years ago he had felt pains after micturating. The pain was at first of a cutting nature, and was referred to the region of the neck of the bladder, but there was not at the time any alteration in the character of the stream from the urethra. In the course of time he found that the frequency of micturating gradually increased, and occasionally the urine was mixed with large quantities of blood. Previous to this time he had been healthy, his habits were temperate, and his family history was exceptionally good. During the last few years he had occasionally passed gravel, sometimes pieces coming away with the urine as large as wheat-grains.

On admission he was found to be a well-built muscular man,

of rather florid complexion, and with hair turning grey. Notwithstanding the frequent loss of blood, he declared that he had not grown perceptibly thinner. During the day, he required to pass urine frequently, but the length of the intervals was very variable; at some times he was able to go two hours, at others being compelled to micturate every five or ten minutes. Movements increased the frequency, and gave rise to some pain, which, however, was never excessive. There was never any retraction of the testes, nor had he ever suffered from sickness or diarrhœa. He was sounded by Mr. Bellamy, but no calculus could be detected, and he was ordered a mixture containing small quantities of tincture of perchloride of iron and tincture of opium. The urine was almost always tinged with blood, but the amount and colour varied greatly; at times the urine being bright scarlet, and at others the amount of blood being so small as only to be detected by microscopic examination. No calculous matter was passed during his stay in the hospital, but when the quantity of blood in the urine was larger there was usually to be found a large number of whitish flocculent masses at the bottom of the receptacle, which proved, on examination, to be small amounts of decolorised fibrin.

During the absence of Mr. Bellamy the patient came under the care of Mr. Morgan, who on sounding the bladder was unable to detect the presence of any calculus, but the sensation was given of the presence of a soft uneven mass lying at the posterior part of the bladder. Examination per rectum showed the prostate to be slightly enlarged, but did not assist in determining the nature or size of the new growth. Accordingly the patient was placed under the influence of ether and again sounded, when the previous conjecture was still further strengthened. The bladder was then washed out by means of an apparatus which Mr. Morgan has lately devised for the examination of detritus after lithotrity. The result of this was the removal of a large quantity of the decolorised fibrin with a good deal of fresh blood; but under the miscroscope no characteristic epithelial cells could be detected.

On May 11th the patient was again placed under ether, and a staff having been passed, and the patient being in the position for lithotomy, Mr. Morgan, having first divided the skin in the middle line a little above the anus, passed a lithotomy knife down to the groove in the staff and made an incision of the urethra of about three-quarters of an inch in length. Through this wound the left forefinger, aided by the pressure of the right hand on the abdomen above the pubis, was able to explore the greater part of the walls of the bladder, as pointed out by Sir Henry Thompson. There was found to be a quantity of soft velvety growth springing from the posterior wall, and generally diffused, but one large mass grew as from a pedicle, and this was easily grasped between the blades of a lithotrite, and removed through the incision. A full-sized catheter was introduced through the wound and secured. Very little bleeding followed the operation, and the patient passed a comfortable night. On the following day the catheter came out of its own accord, and was not replaced. On the second day the patient was slightly feverish, but after the bowels had been well relieved this passed off, and he made a rapid recovery; so that he was up and about the ward on the sixth day after the operation, urine being passed by the urethra only every two or three hours, and containing hardly any trace of blood.

The growth removed resembled a filbert in size and shape, and in structure consisted of a rather contracted pedicle from which sprang innumerable branchlets, which again were subdivided into small villous prolongations. The villi consisted of a basement containing vessels, and were covered by layers of epithelium of a squamous character.

At his own request, the patient returned home at the end of a fortnight, and Dr. Raper, who has attended him since, reports in a letter dated July 12th, that he "remained very much better for some time after he returned home; his water was comparatively free from blood, and he only required to pass it once in two or three hours; sometimes there was a little blood-stained mucus at the bottom of the chamber, and a few gritty particles passed at times, similar to what he had been passing before he went to the hospital, but less in quantity and in size. Since Friday last he has not been so well, the blood has much increased and he has to pass water more frequently, often two or three times in an hour; also the water passes less freely, and he has more pain and feels weaker."

DISTRICT HOSPITAL, WEST BROMWICH.

RUPTURE OF LIVER; DEATH IN THIRTY-FOUR HOURS.

(Under the care of Mr. SANSOME.)

G. R——, aged forty-six, was admitted, Aug. 25th, about 4 P.M. He was a labourer, employed at some chemical works near the hospital. In the afternoon he was standing behind a stationary truck for the purpose of coupling it to others coming up behind and drawn by horse power. For some purpose he stepped out before the hinder trucks had been quite drawn up, the buffer struck him in the back, knocking him forward on to the buffer of the stationary truck with such force that the latter was propelled about two yards.

On admission he was suffering from severe shock, his features being pinched and sallow, surface cold, and pulse feeble. The conjunctivæ were not discoloured, and there were no marks of violence about the body. The area of hepatic dulness was somewhat extended posteriorly. Hot fomentations were applied, opium administered internally, and milk only ordered. About midnight eight ounces of clear, high-coloured urine were drawn off, but catheterism was subsequently needed. Next morning the same conditions obtained, except that the dulness was not so extensive. He suffered acute pain and nausea; the shock seemed intensified, and stimulants were ordered, but without avail. About 8 P.M. all pain ceased, and he expressed himself much better. This continued till 11 P.M., when delirium supervened; he rapidly sank, and died at 12.30 A.M. on the 26th.

At the post-mortem, fourteen hours afterwards, the body was found to be well nourished and muscular. On opening the abdomen a large quantity of clear bloody fluid escaped, and on the posterior border of the right lobe of the liver was a gaping jagged wound, three inches in length and one inch in depth at the centre, which was the deepest part. Three inches anterior to this was another wound two inches long, about one-twelfth of an inch deep, but in which the capsule was not in its entire extent torn through. The gall-bladder and duct were uninjured. There were numerous clots around, and the ascending colon and surrounding structures were much discoloured. The other organs were healthy.

It will be observed that the patient lived thirty-four hours after the receipt of the injury.

GUEST HOSPITAL, DUDLEY.

LATERAL LITHOTOMY; EXTRACTION OF A LARGE URIC ACID STONE, WEIGHING THREE OUNCES AVOIRDUPOIS.

(Under the care of Dr. UNDERHILL.)

B. J——, aged twenty-three years, a fender maker, of average development, but very anæmic, was admitted on June 2nd, 1882. There was no particular family history, and he had had no illness of moment until the present. He stated that when a schoolboy he experienced pain when micturating; that this had continued until the present time; that slime sometimes followed the urine, and that the stream had sometimes stopped suddenly, but that he had not observed any blood in it. For five months before admission he did not work, and remained chiefly in bed, the agony during micturition, which was frequent, being intense, and the urine turbid. During that time a sound was twice passed without a stone being detected; possibly it did not completely enter the bladder, as there was slight hypospadias, with much spasm and irritability of the urethra. Under ether a large stone was detected on June 9th. The man being under the influence of ether, left lateral lithotomy was performed in the usual way; the stone was grasped with difficulty, and the forceps slipped twice during the attempt to remove it (as there were none at hand suitable for a very large calculus). The incision was then extended in a backward direction with a bistoury; the stone was again grasped, and after long and steady traction, with much force, was extracted. The sphincter ani was slightly lacerated during the last part of the operation. A fair amount of hæmorrhage took place, which soon ceased on bringing the thighs together. The mucous membrane of

the bladder was felt to be roughened. The shock of the operation was severe, and opium was administered on recovery from the ether. The stone was irregularly oval; apparently it consisted of uric acid, with a thin phosphatic coating. It weighed just over eight ounces avoirdupois; length, 3½ inches; breadth (greatest), 2⅞ inches; circumference at greatest breadth, 7½ inches.

June 22nd.—There have been no unfavourable symptoms. Temperature has only reached 100° F. on two occasions. Urine was passed to-day, for the first time since the operation, per vias naturales.

July 22nd.—Full diet has been taken since June 28th, and the man has become quite fat. A fistula remains at the anterior part of the incision, but very little urine passes by it, and that only occasionally. Some small phosphatic scales have been expelled per urethram. He walks about a little. A mixture of half a drachm of dilute nitric acid with cinchona was ordered, and the sinus to be injected with nitric acid lotion four times a week.

August 5th.—Patient remains in the hospital; the fistula has not yet closed. General health good.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.

COMPOUND DISLOCATION OF ASTRAGALUS FORWARDS AND INWARDS; EXCISION.

(Under the care of Dr. STEPHENSON.)

IN THE LANCET of September 2nd, a case is reported from St. Albans of a simple dislocation of the astragalus. As complementary to it the following may not be without interest.

On July 3rd, J. K——, while working in a gravel pit, was buried under a large quantity of falling earth and stones. On admission into the infirmary, he was found to have a gaping wound, some four inches long, extending over the inner and dorsal surfaces of the left foot. Through this the head of the astragalus protruded. The foot itself was twisted outward. There was much swelling and effusion into the soft parts. The tibia and fibula were intact, and the ankle-joint uninjured.

Ether being administered, reduction was attempted. This failing, and the bone seeming much detached, it was decided to excise the whole of it. This was readily done. Drainage being provided, the foot was carefully adjusted to a back-splint with foot-piece. The wound healed rapidly; the drain was removed on the fifth day, and the parts quite recovered by July 30th.

Owing to the extensive contusion the outer side of the leg received from the falling earth, large sloughs formed up the leg, denuding in one place the fibula for more than an inch. This delayed the man's discharge from hospital until September 1st. He can walk with ease, the new false joint admitting of both flexion and extension. The amount of shortening of the limb is barely appreciable.

KASHMIR HOSPITAL.

TWO CASES OF HYDATID OF THE LIVER.

(Under the care of Mr. DOWNES.)

CASE 1.—A middle-aged woman was seen in September, 1877. There was a large tumour extending from the liver to about two inches below the umbilicus; it was most prominent a little above the level of the umbilicus on the right side, and in one spot where it particularly bulged distinct fluctuation showed that it contained fluid. The history of the case and the appearance of the patient seemed to indicate that it was not an abscess; there was considerable pain, but no fever, and the pain had come on gradually and seemed to be due to pressure only. Hydatid of the liver was diagnosed; and the tumour was tapped with a very small trocar and cannula. The fluid withdrawn from it (which amounted to about half a gallon) was quite clear and non-albuminous. The tumour disappeared, and the woman experienced great relief. The patient remained quite quiet for some days. After about a week fever supervened, and there was tenderness at the spot which had been punctured. The fever disappeared, but a swelling was observed near the spot of puncture, and the tumour evidently contained fluid; this swelling increased for a few days, when it became stationary. The tumour did not extend below the level of the umbilicus. She remained in hospital for two or three weeks, when she returned to her home. She and her husband were very desirous that the tumour should be tapped again, but this was not done, as it was thought that it might become absorbed.

When the woman left the hospital the swelling had not materially decreased, but there was no tenderness, and the tumour extended only to about the level of the umbilicus, instead of occupying a large part of the right iliac fossa, as it did before the operation. The patient has not been heard of since.

CASE 2.—The subject of this case was a middle-aged man, who was seen in September, 1879. There was a round tumour in the epigastric region extending down to the umbilicus, and apparently connected with the liver. It was particularly prominent in the very centre of the epigastric region, and there was indistinct fluctuation. The tumour was very tense, and pressure gave rise to very great discomfort, but not amounting to acute pain. The tumour did not extend much to either side, and this made the diagnosis a little puzzling; but, taking everything into consideration, it seemed certain that it was a case of hydatid of the left lobe of the liver. The patient lived a long way from the hospital and he could not go there. Mr. Downes then and there in the open fields, surrounded by an interested group of villagers, inserted a small trocar and cannula, and drew off more than a quart of fluid, which was slightly turbid. This gave marvellous relief immediately. The man was carried to his cottage and kept quiet for some weeks.

After about a month or six weeks he paid a visit to the hospital. He was not then suffering from any pain or inconvenience, but a small tumour, apparently containing fluid, was in the position of the original tumour. As in the former case, this reaccumulation of fluid was not tapped, and the patient was told that this swelling would probably subside of itself. He did not present himself again, so it is hoped that he considered himself cured.

These two cases illustrate what has already been written by the late Dr. Murchison—viz., that hydatid tumours of the liver may be tapped in the majority of instances with a small trocar and cannula without danger; and that this proceeding gives immediate and complete relief, and in many cases may cure the disease.

Reviews and Notices of Books.

Human Parasites. A Manual of Reference to all the known Species of Entozoa and Ectozoa which (excluding the Microphytic, Confervoid, and Simple Sarcodic Organisms) are found infesting Man. By T. SPENCER COBBOLD, M.D., F.R.S., F.L.S. London: Longmans, Green, and Co. 1882.

THE author of this work has done so much to advance our knowledge on the subject of which it treats that any further contributions he makes to it are always welcome. We have here in a concise and compact form a synopsis of all the species of animal parasites infesting the human body, including those whose "visits may be little more than instantaneous." Each species is described, its habitat and intermediate host stated, its larval condition noted, and mention made, when necessary, of experimental researches upon it. Lastly, reference is made to the literature of the subject, which in the case of the Filaria Bancrofti (syn. Fil. sanguinis hominis) comprises a complete bibliography, occupying more than five pages. The utility of the book is self-evident, and we hope that its publication may do something to remedy the state of affairs to which the author alludes in his "concluding remarks"; and to show our freedom from the "insane prejudice" therein referred to, we cannot do better than transcribe these militant words for the benefit of those concerned who may not have the opportunity of perusing them in the original:—

"The literature of the subject of microphytes has of late increased to such an extent that it would require several pages for the mere enumeration of published memoirs. As a model of the exhaustive treatment of one department,

Dr. H. Vandyke Carter's work on Spirillum Fever leaves nothing to be desired. If our leading hospital physicians imagine that it is possible for any one human intellect to acquire a thorough knowledge of all that appertains to parasites, parasitic diseases, and their treatment, they must be flatly told that they greatly deceive themselves. Not only so; they must be informed that by restricting their teaching to commonplace subjects, they do serious injustice to the rising generation of medical practitioners. An insane prejudice against special knowledge has recently sprung up. When it does not proceed from individuals who are ignorant of their own ignorance, it can only have for its object the restriction of scientific investigation and the suppression of the law of human progress. In civilised communities the working of the principle of division of labour is intimately bound up with the public welfare, and those who arrogate to themselves the possession of universal medical knowledge do great injustice to the cause of suffering humanity. Specialisms, doubtless, like other good things, are liable to abuse, but when such developments of culture are based upon a sound antecedent education at our medical schools and universities, there need be no fear as to the general result. To rescue every department of the science of medicine from the hands of vulgar and unqualified persons demands an effort which should secure the approbation of every right-thinking member of the medical profession."

The Pharmacopœia of the London Hospital. Compiled under the direction of a Committee appointed by the London Hospital Medical Council. London: J. and A. Churchill. 1882.

THE old Pharmacopœia of the London Hospital having been for some time out of print, the Medical Council considered that the matter might with advantage be revised, and appointed a committee of the medical staff to report on the subject. The result is the work before us, which is practically not only a pharmacopœia, but a guide to the art of prescribing. In addition to the hospital formulæ, we have a materia medica, a collection of diet-tables with directions for the preparation of peptonised food, and an appendix in which are given instructions for taking cases in the wards, for estimating sugar and urea, for preserving and staining animal substances, for the treatment of cases of poisoning, together with a great deal of very useful and practical information. The work has been thoroughly done, and many of the formulæ are entirely new. In the materia medica we are glad to notice the introduction of sanguinis bovinus exsiccatus, or defibrinated desiccated bullock's blood—a valuable preparation used chiefly in the form of an enema in cases of gastric ulcer and other diseases in which food is not retained by the stomach. The list of enemata is very complete, and the peptonised nutrient enema is of especial value. The ammoniated liquid extract of ergot is an excellent preparation, and will be found of considerable use in obstetric practice. Extract of malt and extract of malt and cod-liver oil have very properly been admitted as pharmacopœial preparations; they are both of such inestimable value in the treatment of all wasting diseases that no hospital or public institution for the treatment of the sick can afford to do without them. Quebracho has been deemed worthy of insertion, although, curiously enough, the more popular Grindelia robusta has been omitted. Directions are given for the preparation of gossypium ferratum and gossypium iodatum, both of which are of much value. The list of injections for hypodermic use is very full, and includes carbolic acid, sclerotic acid, atropia, curara, ergot, perchloride of mercury, morphia, morphia and atropia, quinine and strychnia. The only omission of importance is apomorphia, a most valuable emetic in cases of poisoning. Under the head of Lincti we find only two formulæ; a morphia linctus containing about three minims of the liquor with a little spirits of chloroform and honey or treacle would be a useful addition. The aconite mixture—five minims in each dose—is far too strong, and the caution respecting its use in this quantity is not sufficiently emphatic. In the majority of cases the dose of the active drug in the mixtures errs, if at all, on the side of safety. It may be noticed as a matter of curiosity that there is a mixture of Chian turpentine. Under the head of Powders we find pulvis agarici, "powder of dried mushroom," of which the dose is given as from ten to twenty grains. The definition of the drug to be used is in this case not sufficiently precise. As far as we are told, it might be any mushroom. As a matter of fact, it is of course the agaric of the larch which is intended, a drug now largely employed in the treatment of the night sweating of phthisis. It should be remembered, however, that the agaricus muscarius has been recommended for the same purpose, and the substitution of one species for the other might be attended with disastrous results. A few drugs are omitted of which we should have been glad to see some mention; fortunately, however, only a few. A substitute for pancreatic emulsion might be introduced in the next edition, together with mixtures of pulsatilla, hydrastis, and nitro-glycerine.

The Surgery of Deformities. By E. NOBLE SMITH, F.R.C.S. Ed., L.R.C.P. Lond., Surgeon to the Farringdon Dispensary. With Illustrations. London: Smith, Elder, and Co. 1882.

THIS is a well-meant attempt "to produce a practical and useful guide to the diagnosis and treatment of Deformities of the Human Body." No claim to originality is made, and to a very large extent the teachings and writings of Adams, Little, Chance, Stafford, and Shaffer have been laid under contribution, and the author has managed to give a useful epitome of the views of these authorities. In many places we find it wanting in practical details, and in the matter of diagnosis in particular the reader will often look in vain for substantial help. We are sorry that the great advance in surgical treatment during the last decade does not appear to be appreciated by Mr. Noble Smith, who, in adversely criticising the operation of resection of the tarsal arch, says, "The most rudimentary knowledge of the etiology of the various forms of blood-poisoning ought to make even a bold surgeon hesitate before exposing a patient to the risks of absorption of the septic débris, which must *of necessity* remain in such a wound"—the italics are ours. We are tempted to reply, that "the most rudimentary knowledge of the etiology of sepsis ought to make even a bold writer hesitate before speaking of decomposition as a *necessary* event in a wound made by a surgeon!" Our surprise, which was extreme, when we found that the author of "The Descriptive Atlas of Anatomy" states that the medulla oblongata is continued in the spinal canal, has been even more excited by reading a few lines lower down, in the section devoted to "disease of the upper two cervical vertebræ," that "even when paraplegia occurs from pressure upon the cord the patient may recover from the severer symptoms." As pressure upon the other portions of the cord is elsewhere treated of, this sentence must of necessity refer to paraplegia from pressure upon the highest part of the spinal cord, which only a few lines above is called the "medulla oblongata." "The most rudimentary knowledge" of the instantly fatal effects of paraplegia from pressure upon this part of the cord would have saved Mr. Noble Smith from this error. In several places we noticed the names of authorities referred to misspelt: thus we find references to "Althus," "Diffenback," "Hay" of Leeds, and "Prescott Hewitt"!

OUR LIBRARY TABLE.

The Annual Oration delivered before the Medical Society of London, May 1st, 1882. By E. SYMES THOMPSON, M.D., F.R.C.P. London: Adlard. 1882.—The subject chosen for this oration was "The Old Founders and the New

Honorary Fellows," in which the author sketched the outlines of the lives of such men as Fothergill, Lettsom, Jenner, and many others less known to fame, side by side with Virchow, Billings, Charcot, Volkmann, and Verneuil, the occasion of the Congress being seized to enrol those leaders in the Society. The portraits of the "founders" are given in a frontispiece reproducing the well-known painting in possession of the Society. The oration is written in an agreeable style, and the interest is well maintained throughout.

The Physical Signs of Pulmonary Disease. By GRAHAM STEELL, M.D. Ed. Edinburgh: Maclachan and Stewart. London: Simpkin and Marshall. 1882.—This is a carefully written book, intended for use in the wards. The author has evidently studied the subject for himself, and has also incorporated in the book comments upon the masterworks of Laennec, Skoda, and Walshe. Any student who steadily follows the instruction contained in it will lay a good foundation for physical examination, which in some quarters is characterised by an over-refinement that hardly stands practical working. Dr. Steell has corrected this temptation, and deals with broad, well-established facts, besides conveying to the reader as clear ideas as possible on a subject which has been needlessly rendered difficult by the capricious use of terms in different senses.

The Illustrated Quarterly Journal of Medicine and Surgery. Edited by G. H. FOX and F. R. STURGIS. Vol. I., No. 3. New York: E. B. Treat, Broadway.—This number fully maintains the excellent character of the two former issues. The following subjects are dealt with and excellently illustrated. Duodenal ulcer, a new method of closing urethral fistulæ, a case of congenital keratoma, papilloma of pharynx, gummous iritis (two cases), therapeutic uses of rubber tubing, and elastic tension in the treatment of Pott's disease. In all there are no less than thirty-four illustrations in this number. Dr. Chamberlain describes the numerous uses of rubber tubing for purposes of irrigation, injection, and the application of heat and cold. He maintains that coils of rubber tubing are far superior to the leaden pipes known as Leister's, especially because they are lighter, more easily adapted, and can at any time and by anyone be made as required for individual cases. Dr. McBurney records two very good cases of successful cure of penile urethral fistula, and the numerous illustrations make the steps of the operation quite plain—a feat of extreme difficulty if only verbal descriptions are given. One chief feature and element of success in these cases was making an opening into the urethra in the perineum: the urine was drawn off through it several times a day, and thus the parts about the fistula were kept at perfect rest until healing was obtained. The perineal wounds healed very quickly.

La Lithotritie doit être faite sans Traumatisme? Par le Dr. RELIQUET, Lauréat de l'Institut. Paris: A. Delahaye et Cie. 1882.—This is a reprint of a paper recently published in the *Gazette des Hôpitaux*, in which the author gives a very emphatic answer in the negative to the question he asks. He professes to be a rigid disciple of Civiale, and he regards the protection of the urethra and bladder from all injury as the main thing to be observed in the operation of lithotrity. Wherever he can do it without any lesion, he evacuates the fragments by injecting or aspirating; but rather than run any such risk he prefers to leave the fragments in the bladder. He insists that the operation itself should leave no traces behind it; and he also cautions against overdistension of the bladder in the use of the aspirator, and is particularly opposed to Bigelow's practice of preventing any escape from the bladder by an elastic ring encircling the penis. All surgeons would in theory agree with Dr. Reliquet; but it has been clearly shown of late years that the urethra and bladder are far more tolerant of instrumentation than was previously supposed. It is easy to see that this may lead surgeons to excess in that direction, and so far as there is that danger, we welcome Dr. Reliquet's words of warning; although we cannot thoroughly endorse the precise practice he urges.

Winters Abroad. By R. H. OTTER, M.A. London: J. Murray. 1882.—The author's description of a voyage to Australia in a sailing vessel is a faithful picture of the life on board such a ship, and demonstrates the necessity that exists for invalids to travel only by first-class steamers. Well-appointed passenger steamers now cross the ocean in every conceivable direction, whereas sailing vessels have almost ceased to carry anything but their crews and merchandise, and are only in exceptional cases to be chosen for the abode of an invalid. Mr. Otter has formed a most favourable opinion of the climate of Sydney during the cold season of the year, but as the hot months approach he recommends a change to the high-lying towns of Tasmania. His account of Melbourne, Queensland, and New Zealand, as health resorts for invalids, is very valuable, as also are his remarks on the Riverina. Mr. Otter thinks that this part of Australia presents a perfect climate for nine months of the year, especially for persons suffering from affections of the lungs. The climates of Algeria, Egypt, and the Cape of Good Hope are considered with reference to the circumstances of invalids. Regarding the latter, Mr. Otter advises no one in search of health to remain too long in the neighbourhood of Cape Town, and not to take up his abode for any length of time within 100 miles of the sea coast, unless he can be 1500 feet above the sea level. The volume before us is full of practical information and knowledge which too many invalids might otherwise have to gain by dearly bought experience. But our author visited the Cape in 1877, and we have reason to think if he returned there now he might not find the hotel he recommended up to the mark. Information upon these points should be accurate and up to date, otherwise it is best omitted. Passing from a description of the various climates above referred to, our author describes the advantages which Davos affords as a winter resort for a certain class of patients. He thinks "too much is claimed for it by its admirers, and far too little conceded by its detractors." Our space will not permit us to follow Mr. Otter into the data he gives for arriving at this conclusion. We recommend this work to the medical profession, as containing a reliable account of the winter resorts referred to. Medical men have frequently to advise patients on the question of a residence for the winter. A real knowledge of the difficulties to be encountered on the journey, and of the accommodation and kind of place recommended, is therefore of great importance. The fact is, knowledge of this kind can only be properly acquired from personal experience; but next to this in value is information such as that contained in the pages of a work like the one under notice, which is, moreover, pleasant reading. One defect in the book, however, is the absence of an index. We can only hope that Mr. Otter will supply this deficiency in a future edition, and that he will endeavour to complete the valuable work he has commenced, and give us full information regarding the advantages of other winter resorts besides those referred to in this volume.

Morality. By MAURICE CHARLES HIME, M.A., LL.D. London: W. H. Guest, Warwick-lane, Paternoster-row. Dublin: Messrs. Sullivan, Marlborough-street; and Marley and Son, Mid Abbey-street.—The little book by Dr. Hime on Morality has very deservedly reached a third edition. Admonition on this subject is much neglected, because it is a very difficult and delicate one to treat, and because parents are sometimes prone to think their children above the danger of falling into the vice of sensuality. The author is eminently adapted to perform the task, owing to his

experience, scholarship, and great zeal. Moreover, in undertaking and accomplishing this work he has shown a good example of self-control and manly conduct—the very principles he tries to inculcate among young men. This, in our opinion, enhances the value of the book; for example is better than precept. The greatest tact is displayed throughout. The reader, if he is influenced at all, can only be influenced for good. Dr. Hime brings to his aid in his pleading with young men the Bible, natural religion, metaphysical reasoning, the teachings of experience, and common sense. These powerful weapons he wields well, and does not refrain from drawing largely on the assistance of other authors. Against this array of revelation, reason, and authority no young man who respects truth can defend for a moment immorality. At the beginning of the second chapter the author ably refutes the argument that "it is a matter of no great consequence whether one exceeds a little in his youth or not." While reading this part of the book we were reminded of the great message of John Knox to men. According to Carlyle, his message was: "Let men know that they are men, created by God, responsible to God, who work in any meanest moment of time what will last through eternity." Dr. Hime does well to lay great emphasis on moderation in alcoholic drinks. When intemperance has lasted any considerable time true repentance is very difficult, almost impossible. This is mainly due to the fact that the brain itself becomes so altered that the higher functions of the mind cannot be put into action. The vice of sensuality diminishes in man as old age comes on, while intemperance increases as long as the victims live and indulge their appetites. Of the two vices, while intemperance is the more persistent, sensuality is the more corrupting and depraving to the mind. Both, unhappily, often go hand in hand. The section on prayer is especially good. Few will feel disposed to doubt the subjective efficacy of prayer, which Dr. Hime has dwelt upon. We should be glad to see this little book in every young man's collection, and especially in the hands of those who, after leaving school, are brought face to face with the temptations of a great metropolis. Anyone who carefully studies this work, and who makes use of the four safeguards mentioned by the author, will be well protected against what is the besetting sin of many, and can fearlessly face those who try to argue him into doing what is wrong. The purity of the object and the intrinsic worth of the book ensure, we are confident, a large amount of success.

The Scientific Basis of National Progress, including that of Morality. By G. GORE, LL.D., F.R.S. London: Williams and Norgate. 1882.—This little book, dedicated to the Birmingham Philosophical Society, sets forth the power and use of scientific knowledge in all progress, material, mental, and moral. The last section advocates the promotion of original scientific research. It is simply written and fully illustrated by examples; that portion which relates to material progress is naturally the most incontrovertible. If the author seems at times to exalt the claims of natural science to an undue degree, it must be remembered that it has by no means yet met with the universal appreciation which it deserves, and that the doctrine now prevails that if we want anything we must ask for it loudly enough.

We have received a copy of the third edition of the *Improved District Railway Map*, published by Messrs. W. J. Adams and Sons, Fleet-street. It is well and clearly printed and coloured, and the cost is but 6*d.*; mounted on canvas, 1*s.* 6*d.*

PREVENTION OF SMALL-POX.—At Willenhall the General Purposes Committee of the Local Board have issued bills advising parents to prevent their children as much as possible from attending the forthcoming wakes, in consequence of many of the show-people coming from Wednesbury, where small-pox is said to be very prevalent.

New Inventions.

HIDES' PATENT MOULDED MILITARY AND GENERAL AMBULANCE.

MR. HIDES has very successfully contrived a light serviceable ambulance in which he avails himself of his well-known felt. It consists of a simple wooden frame made of two poles and two cross-bars. Attached to this frame are davits from which is suspended a shell of felt moulded to the form of the back of a well-grown man. Attaching the frame to the davits are Hides' "superb" elastic springs, which are connected with bands of webbing passing under the frame so as to support the main part of the weight carried, and thus guard the felt from wear and tear. The obvious advantages of this form of ambulance are its extreme lightness, and especially the greater comfort and safety secured to an injured person. In a hammock of any kind the person carried rolls down into the bottom; carried on a flat surface broken limbs move and are unevenly supported. But by Hides' contrivance every part of the body is well and equably supported, and the head, arms, and legs in particular lie in troughs so well fitting that they almost answer the purpose of well-adapted splints. The shell is easily unshipped, and the davits removed from the frame, and six frames can then be made to form a crate in which the shells can be packed, so that these ambulances are very easily carried in bulk.

Mr. Hides has carried out the same idea in another direction, in the form of a support or bed rest, intended especially for cases of weak or curved spine. A large piece of felt is moulded to the back of the patient, and when hardened is fitted on to a light frame with springs so as to afford support and pressure to the whole surface of the back of the trunk. This will no doubt be found useful.

"THE CHEMICAL LUNG."

To the Editor of THE LANCET.

SIR,—As from time to time you have taken great interest in the Chemical Lung designed for the purification of hospital wards, sick rooms, and other collections of foul air, I venture to forward a report of the action of one sent to and experimented upon in the civil hospital at Aden. The following are the words of the medical officer under whose care the experiments were carried out: "The case in which the punkah was tried was that of a man suffering from phagedænic ulceration of the leg, a disease which gives rise to the most foul and offensive odours, so offensive to the other patients in an ordinary ward that it was necessary to isolate him in a small room. It was in this that the punkah was tried with the most beneficial effects, the air being kept odourless and inoffensive so long as the punkah was working; all other disinfectants being discontinued with the exception of a charcoal poultice immediately over the ulcer, but quite incompetent to prevent smell. I consider the punkah a very useful invention and quite able to carry out all that is promised for it. For infectious disease hospitals, for night wards and isolating rooms of ordinary hospitals, it might with advantage be adopted. The best test I know to which it could be subjected would be to try it systematically for a whole year in the night wards of one of the big Indian gaols, the mortality of which is unequalled in any community throughout the civilised world. This mortality arises doubtless from overcrowding, theoretically correct as the linear measurements and cubic feet of air allotted may be." I feel that no comments of mine are needed upon the above; I would only state the results of an experiment carried out by myself in a room crowded with twenty couples, dancing for five hours, the windows being shut, in the middle of last June. The punkah kept the air of the room deliciously cool and pure the whole time.

I am, Sir, your obedient servant,
RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, Sept. 19th, 1882.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 16, 1882.

PROBABLY no official reports emanating from the Local Government Board have ever been more anxiously awaited than those on the Use and Influence of Hospitals for Infectious Diseases by Dr. THORNE THORNE and Mr. W. H. POWER. The need for definite information on this subject has been brought home to everyone interested in the sanitary condition of the metropolis by the lengthy and costly legal proceedings which have already resulted in the closing of one large institution for the reception of infectious persons, and in the limitation of the usefulness of others. Nor is the subject one that concerns London alone, for within recent years a number of hospitals for infectious diseases have sprung up in all parts of the country, and communities have been taught to regard such institutions as helpful in a large degree, if not absolutely necessary, for the prevention of the extension of the class of disease for which they have been erected. The fact that the use of these hospitals might be attended by any drawback was so little believed by the members of our own profession, that nothing short of the Attorney-General's masterly management of the case against the hospital of the Metropolitan Asylums Board at Hampstead could have succeeded in arousing suspicion that the full influence of such institutions upon the neighbourhood surrounding them might not be fully known. But the story which Sir FARRER HERSCHELL first told concerning the Hampstead Hospital was soon told again for other hospitals of the Metropolitan Asylums Board, and thus the subject attained a degree of importance which it was impossible not to recognise.

The relations of the Local Government Board to these and similar institutions in all parts of England and Wales made it incumbent on that Board, for its own information, to learn definitely their effect on the neighbourhoods in which they were situated. In the chapter in which Dr. BUCHANAN introduces the reports of Dr. THORNE and Mr. POWER to his Board, he states that a return made in 1879 shows that "296 authorities had arrangements of one sort or another in hospitals of their own, or by an understanding with their neighbours, for the reception of infected persons who could not be treated in their own homes with safety to other people"; and, referring to the fact that sanitary authorities who might be wishful to provide hospitals were frequently finding themselves hindered by a number of difficulties from carrying out their intentions, he says it was seen that the Board could with advantage collect, for the assistance of some sanitary authorities, the experience of other authorities who had made hospital provision, and could learn whether there was any ground for the fears which were entertained by landowners and others, and what were the conditions for removing or reducing any real danger found to exist. To this object Dr. THORNE'S labours were devoted, and during 1880 and 1881 he inspected seventy hospitals for infectious disease, the history of which occupies the greater part of the volume now before us.

We shall reserve for further and fuller discussion the many important points treated in Dr. THORNE'S report, but we may state briefly that he gives evidence of the value of hospital accommodation, particularly at the beginning of epidemics. His report also deals with hospitals under all conditions, and includes a short account by Mr. SHIRLEY MURPHY of an inquiry into the amount of prevalence of fever in the neighbourhood of the London Fever Hospital. Dr. THORNE found that, apart from spread of infection due to faulty hospital administration, there was no evidence of any of the infectious fevers other than small-pox having occurred in the neighbourhood of infectious hospitals; and with regard to the latter disease, in only two instances were there grounds for suspecting that any such occurrence had taken place. But Dr. THORNE, during the course of his inquiry in the provinces, had met with no recent instance in which a large aggregation of small-pox cases had occurred in any infectious hospital in the vicinity of dwellings, and to this extent he regarded his inquiry as to the influence of such hospitals for harm as incomplete. Under these circumstances the inquiry was extended to London, and Mr. W. H. POWER was associated with Dr. THORNE for the purpose of ascertaining the experience available as regards the Fulham Hospital. And it is in Mr. POWER'S report on the influence of the Fulham Small-pox Hospital on the neighbourhood in which it is placed that the more immediate interest chiefly centres.

We cannot do better than follow the report itself in the history it gives of this institution and its surroundings. The hospital occupies a site which, as Mr. POWER says, from the view-point of medical knowledge at the time of its selection, was singularly free from objection, for, with few exceptions, there are not within 500 feet of the limit of the hospital grounds any inhabited dwellings. As regards traffic routes, the hospital is also isolated, for by two roads alone can ambulances reach it. At the time Mr. POWER began his inquiry, small-pox, although prevalent in the East end of London, had not invaded the surrounding parishes of Fulham, Chelsea, and Kensington; but the hospital had, on December 13th and 14th, 1880, received from the Homerton Hospital forty persons convalescent from small-pox, and it continued to receive such cases until Jan. 17th, 1881, the date at which Mr. POWER'S labours began. By this time 110 convalescents had been admitted. Meanwhile, fifty-five acute cases had also been received, of which only five came from Chelsea, Fulham, and Kensington. At this moment, therefore, there was really no reason for the people of the neighbourhood to visit the hospital, a point upon which Mr. POWER properly lays great stress. He immediately, for the purposes of comparison, selected a special area of a circle round the hospital of one mile radius. That his arrangements for obtaining information of cases were most thorough is best made evident by the fact that a subsequent house-to-house inspection brought to his knowledge only half a dozen cases which had not been previously reported. The account which he gives of the occurrence of cases in the neighbourhood of the hospital may therefore be considered to include all such attacks—a matter of very considerable importance. After

the opening of the Fulham Hospital no person in the three parishes of Chelsea, Fulham, and Kensington was attacked in either of the fortnights ending the 11th and 25th of December, but by the 22nd January eleven cases had occurred, all in separate houses, and seven within the special area. An inquiry into the movements of these seven persons showed how two of them had contracted the disease; while another two, although not known to be exposed to small-pox, had worked in the East-end where the disease was prevalent; but for the remaining three no explanation could be found. In the next fortnight ending February 5th, there occurred a general outburst of small-pox in Chelsea, Fulham, and Kensington, the fresh cases numbering sixty-seven, of which forty-seven were situated in the special area, while the remaining eleven were within a further half-mile of the hospital. When households are considered, the disease is found to have invaded fifty-six fresh houses during the fortnight; of these forty-one were within the special area, and eleven others within a further half-mile. But a curious limitation of the outburst with regard to time was observed. Of sixty-two persons who were attacked during the previous fortnight, four only began to be ill before January 26th, while in the four succeeding days forty-two persons were attacked, thirty-two of whom lived in the special area, and eight within a further half-mile. The forty-two persons must therefore have contracted their disease at a time when not more than four cases of small-pox had occurred in the special area, and eight only in the whole of the three parishes. An inquiry into the precise doings of the forty-two persons attacked during a fortnight before their illness began showed that in nine cases only could evidence or reasonable suspicion be found that the sufferers had had personal relation, direct or indirect, with a case of small-pox. Mr. POWER admits that up to this stage there is no evidence against the hospital, and if it was to be held responsible for the special prevalence of small-pox in its neighbourhood on this occasion, it must be shown that there was a similar distribution of cases each time the hospital was used in past epidemics. With a view to testing this point he divides the time since the hospital was opened, in March, 1877, into five epidemic periods, and he calculates from the number of houses from which patients were admitted into the Metropolitan Asylums Board Hospital, the amount of prevalence of small-pox in each period in the three parishes, in the special area, and in other parts outside the special area, and for the purposes of comparison he takes a period of one year before the hospital was opened, and shows the distribution of cases of small-pox during that period in the three areas already mentioned. It is unnecessary here to say more than that Mr. POWER has taken pains to eliminate any possible source of error owing to changes of population in these areas—indeed, so far as any changes have taken place, they would tend to make less obvious the different amounts of prevalence in them; nevertheless, in each epidemic period he finds the distribution of cases following the same law—namely, that for every 100 houses in each area a far greater proportion were invaded in the special area than outside, while before the hospital was opened the opposite was the case.

Another point was observed in each of these epidemic periods, which is equally instructive. In each period, without exception, an outburst of disease occurred in the neighbourhood of the hospital. About a fortnight after it contained as many as from thirty to forty acute patients—a length of time corresponding with the incubation period of small-pox; but in the second fortnight a diminution in the number of fresh cases round the hospital invariably took place. The number of convalescents in the institution appeared to have in no single instance any influence in causing disease. A further division of the area round the hospital into rings of a quarter of a mile invariably showed in each epidemic a decreasing incidence of disease the more distant the rings were removed from it. Nor were the cases distributed along the chief lines of traffic, but they were scattered equally over the area surrounding the hospital in a manner that entirely negatived the supposition that they might be due to personal communication. Mr. POWER made this point a matter of painstaking inquiry; he informed himself of every movement of each member of the hospital staff at the time at which infection must have been received by the persons who were attacked in the fortnight ending February 5th, 1881, but failed to find the least relation between the two. Every detail of the hospital administration was examined, but with only negative results. Having in view the distribution of cases and the circumstances connected with their appearance, he is driven to the conclusion that they must be due to atmospheric communication with the hospital.

It may be argued that until the same story can be proved for other small-pox hospitals Mr. POWER'S conclusions must be accepted with reserve; but it must be recollected that a possibility of error of this character has been guarded against by his investigations into the behaviour of five separate epidemic periods, and that the occurrence of disease has on each occasion appeared to be governed by exactly the same laws. That he has dealt most fairly with his subject must be admitted; indeed, he speaks of the reluctance with which he has felt compelled to come to his conclusions; but with such evidence it is impossible not to accept, with Dr. BUCHANAN, that "the Fulham Hospital, with all its advantages of site and construction, has, by dissemination of small-pox material through the atmosphere, given rise to an exceptional prevalence of small-pox in its neighbourhood.

We cannot at this moment enter into Mr. POWER'S speculations as to how small-pox matter came to be disseminated through the atmosphere. This raises a large question, and must be reserved for a further notice; but we cannot leave the present one without bearing witness to the very great ability with which he has dealt with a most difficult question. We find on every page of the report before us the same precise observation and thought as that which characterises his previous work, enabling us to accept with more readiness this last addition to our knowledge of the behaviour of small-pox.

THERE is no more remarkable and, in a way, mysterious, phenomenon of modern times than the influence of the press. We say of modern times, but it is probable that the particular form of moral or social force to which we allude may have asserted its influence and performed its share in the work of progress thousands of years ago, seeing that the life

and history of at least one newspaper published in China dates from a period—almost ages ago. However this may be, it cannot be doubted that "the press," properly so called, that is to say, the journalistic or news communicating development of literature, constitutes one of the most potent controlling authorities of our national life, if indeed it be not the pivot and centre of union and self-government. It is certainly the safeguard of our liberties.

In what the power of the press actually consists, it is not easy to determine. Political and social economists recognise the power, but they have never been able to define it. Probably several elements combine to produce the result. First, there is the impression wrought on the mind by the fact that those who read are in the position of the instructed. There is some source of information to which they have not direct access. The press stands to them in the relation of a teacher, and the mind always, though insensibly, it may be unwillingly, bows to the possessor of greater knowledge than its own. There is clearly something in this; even a stranger or worthless lounger is for the moment invested with peculiar distinction in any community to which he brings news. Secondly, growing out of this prestige which belongs to the press as an oracle, there is the claim to respect which it can and does successfully put forth as a professional enterprise. As a department of industry journalism has not lagged in the march of intellectual advancement. If there be, as undoubtedly there is, a broad line of distinction between journalism and literature, the former has been making excellent progress as far back as we can trace its history. In truth it has outrun literature proper; and whereas the books of to-day, except for the recently acquired information they embody, are no better than, if as good as, the works of those who wrote generations ago, contemporary newspapers have been incomparably improved, both in matter and style, within living memory. Men of average ability, education, and earnestness devote their energy to the collection of news and the production of newspapers, and it must needs be that the claim to authority which grows out of special work of any and every kind is recognised by public opinion. Whether, on the whole, public opinion is not outgrowing the state of pupilage, in consequence of the celerity and completeness with which the data upon which the journalist bases his conclusions are presented to the public, so that the reader is nearly, if not quite as well able to form a judgment as his professional instructor, is a question we will not now attempt to discuss. Suffice it to have recalled to the mind of the reader the leading facts as to the influence of the press, and suggested certain lines of thought, which he may work out for himself, and which will help to prepare the way for that special view of this interesting subject, which we are chiefly anxious to present and enforce.

There is an evident disposition on the part of "authorities" generally to limit the freedom and if possible to reduce the power of the press. We see indications of this intent everywhere. The censorship of news, and now the limiting of news-agents, established and enforced "by authority" during the present campaign in Egypt, is a remarkable instance of the working of this intent. The exclusion of reporters from executions we take to be another. And the endeavours of corporations to suppress the criticism of professional journals of health and hygiene on the sanitary condition of important towns may be also mentioned as instances and evidences of the tendency to limit the power, and if possible restrain the activity, of an agency which has hitherto done excellent service in the cause of right and freedom. By bringing facts to light and pointing out their significance, the press has done more than any other agency to help forward the van of progress and intelligence, and to make and keep peoples free, while despots who reigned by the aid of darkness and ignorance have been overthrown. In matters great and small—political as regards the State at large, or politic in respect to smaller areas and sections of the population—social, commercial, scientific, and sanitary,—in all departments of interest and enterprise, the power of the press has been manifestly exercised in the interests of the people. We think the time is approaching when the whole press and the entire community will need to combine if the blighting and crippling influence of officialism is not to be allowed to efface those liberties which the press has won, not for its own sake alone, or even principally, but for the people, by whose authority and for whose benefit the press exists.

Within the boundary line of our own experience as a journal devoted to the public service in the promotion of health and the limitation and remedy of disease, we have had notable proofs of the "power of the press," and in every instance our own interest has been proved to be identical with that of the profession and the public. Since the late Mr. WAKLEY founded THE LANCET to protect the rights of the public, and to assert the rights of the profession against encroaching corporations, our enterprise has been specifically one of reform. We have not feared to expose abuses or to strive for the removal of obstacles to the progress of science and health. A long score of successes in this enterprise has been our reward, and we shall not flinch from prosecuting our work on the old lines and with the same energy in the future as in the past. Meanwhile we are certainly of opinion that the moment has come when the press generally ought to assert itself, and when the position gained by journalism should be resolutely defended. If it is not to be *free*, it had better cease to exist. It is scarcely possible that such a calamity should befall so vital an organisation, but *if* it did ever happen that authorities obtain control of the journals so that only selected news appeared in their columns, and adverse criticism were repressed, there would at once be an end of all influence and usefulness. A free press is necessary to the freedom of the whole nation and every section of the community. An irresponsible press—albeit that would be incomparably better than a press in chains or the creature of authority—no one desires.

It seems to be forgotten, or intentionally shut out of sight just now, that a natural censorship of the press exists, and must ever exist, in the restraining influence of public opinion. If a journal were found to abuse its power it would not long retain the influence it misused, and great would be the fall of it. The State and the law cannot, of course, afford to leave everything to the arbitrament of public opinion, but some respect might fairly be shown to

that tribunal, which, after all, as regards every moot question, not excepting that of Government itself—which in this country be it remembered is *self*-government—constitutes the court of final appeal. That court may be tardy in its proceedings and slow to express itself, especially in reference to matters relating to its own authority, but when deliverance is given it will be shown that the power exists by which the judgment pronounced can and must be enforced. At the same time, as we have said, the press owes it to its own character as an independent authority to affirm its rights, in so far as these are legitimately based on public opinion. The public *must* be promptly and fully informed, however much the spread of intelligence may inconvenience those who, tricked out in a brief authority, strive to use it as though it were their own. Moreover, the press must be free to speak its mind. This proposition may not at first sight appear so obvious as that previously stated. It may seem that the public, having got the facts, might be left to draw their own conclusions. In some connexions, doubtless, this is true; but if it were true of all, there would be an instant end of professional criticism. For the interpretation of facts special knowledge is generally necessary; when the facts are special, it is imperative that there should be special knowledge to appraise, collate, and explain them. In the absence of such a service, the significance of many facts would be overlooked until it was too late to profit by its recognition. This is why we claim freedom—with responsibility—for professional journalism, and particularly for the special journalism of a profession. If this freedom be not secured to the press, its power will be sacrificed, and it is difficult to see what other force can be found to replace it as a perpetual check on the neglect and wrong-headedness of "authority" and "officialism," by which the people are in continual peril of being misled.

THE prolonged public inquiry which has been held at Norwich by the Inspectors of the Local Government Board, Mr. HENLEY and Dr. AIRY, has elicited a large amount of information with regard both to the death of certain children as the result of erysipelas following on vaccination, and to the injury of others. In all, thirteen cases were submitted for inquiry, but three of the children in question, having been vaccinated privately, were not deemed to fall within the scope of the investigation, which had reference to the effects of vaccination as carried out at the public vaccination station in the city. The majority of these children have unquestionably suffered from erysipelas after vaccination, and Dr. GUY freely admitted that in his opinion this result was in some way connected with the performance of the operation. The main contention of those by whom the inquiry was brought about has been that the infection leading to the erysipelas was inoculated with the lymph, and hence that vaccination as such was responsible for the death and injury resulting. Until the full official report of the proceedings appears it will be impossible to express a final opinion on this part of the subject; indeed we doubt very much whether the facts elicited at the public inquiry are sufficient to clear up such a point. But before the public inquiry was commenced, a careful medical investigation of the circumstances had been made by Dr. AIRY; and this investigation, unhindered by the laws of evidence and other legal technicalities, has doubtless elicited points of medical interest which could hardly have been ascertained with the requisite scientific accuracy by the ordinary legal process of examining and cross-examining witnesses. But even at this stage of the proceedings some points of considerable interest have transpired with regard to this subject. The first of these is that in some of the children the commencement of the erysipelas was observed within some twenty-four hours of the performance of vaccination, in others not till after the expiration of eight days from the vaccination. If infective material producing like inflammatory results had been contained in the lymph, the interval between its inoculation into the system and its manifestation could hardly have varied so greatly. And again, the lymph used does not appear to have been all taken from the same vaccinifer; all the vaccinifers whose lymph is alleged to have produced erysipelas have turned out to have been healthy children; and not only so, but of the children vaccinated with the same lymph some few only had erysipelas, whereas in the remainder the process of vaccination was from the beginning to the end quite natural. If therefore we assume, as we fear we must, that there was relation between the vaccination and the erysipelatous inflammation, we are thrown back not so much on the lymph as the cause, as on some accidental poisoning occurring in connexion with the process of vaccination. Hence doubtless the minute inquiry as to the method in which Dr. GUY performed his duties as a public vaccinator, and which elicited the facts that his lancets were regularly washed between each vaccination, that they were frequently reground and polished by a surgical instrument maker, and that Dr. GUY has several times received a Government grant for the efficient manner in which he has performed the various duties attaching to his office. It is true that much was made of the circumstance that Dr. GUY did not proceed to strip the children before he vaccinated them; but quite apart from the fact that it has never been suggested that the children who suffered from erysipelas were otherwise than healthy at the date of vaccination, we are bound to say that the "Instructions for Vaccinators under Contract" nowhere appear to us to refer to stripping as necessary, and that in nine cases out of ten the very necessary regulations calling for examination of certain parts of the body, and especially of the folds of the skin, can be carried out without resort to any such process. But the same "Instructions" contain a caution which is especially noteworthy in connexion with the cases under investigation, and that is, never to vaccinate, except in cases of necessity, "where erysipelas is prevailing in and about the place of residence." Erysipelas has been prevalent in Norwich quite apart from its incidence on children who were vaccinated at the public station; and the demand that certain cases vaccinated by private practitioners—and this with other lymph than that used by Dr. GUY—should be included in the inquiry, points to the fact that the infective material leading to the erysipelas was of wider distribution than was at first anticipated. Dr. GUY, in his evidence, admitted that towards the end of June, just after the period involved in the inquiry, he became aware that a slight epidemic of erysipelas was prevailing at Norwich. Now, children on the day of vaccination and on the day

when their vaccine vesicles are opened by a lancet for the vaccination of others, present wounds which, though of a very trivial character, afford a means by which such a poison as erysipelas can be received into the system. This poison may have been conveyed by someone, in clothing or otherwise, to the vaccination station; it may have been brought into contact with the children after returning to their homes, some of which were far from healthy; and it certainly seems to have infected some vaccinated infants who never went to the public station at all. Pending the publication of fuller details, we avoid arriving at a conclusion as to the exact channel through which the infection was conveyed, but, by a perusal of the evidence, we are confirmed in our opinion that the lymph of healthy vaccinifers does not of itself produce erysipelas, and that if erysipelas be prevalent in a district, it may by obscure and perhaps as yet unrecognised channels find its way into the human system through the medium of the smallest wounds. Erysipelas has more than once followed in the track of surgical operations which have been necessary to the saving of life, but instead of discarding these operations on that account, every effort has been made to eliminate even the possibility of so grave a complication. No operation ever yet saved so many lives as have been spared to us by vaccination, and if the inquiry held at Norwich has the effect of disclosing some source of danger, hitherto undetected, with which even this trivial operation may under certain circumstances be associated, the cause of vaccination will, as its result, be in the long run promoted, and not retarded.

THOSE who would intelligently grasp the questions involved in Medical Reform should begin their study of the Blue-book of the Royal Commissioners by reading the paper by the Secretary of the Commission, Mr. WHITE, entitled "Statement in regard to recent attempts at Medical Reform." Mr. WHITE carries his readers back to the Medical Act of 1858, and the purpose of those who passed it. He says the Act was the result of a general desire to establish a central authority in the medical profession; to institute a Register of its qualified practitioners; to impose a sufficiently uniform test of qualification before names were entered upon such Register, and to have a National Pharmacopœia. He shows of course that the Council, consisting of twenty-four eminent men, and with an income of many thousands a year, has done some good; that it has produced a Register, that it has published a fairly good National Pharmacopœia, that it has improved preliminary education, and exercised an influence for good on the several licensing bodies. The Act of 1858 "broke down the territorial privileges of the licensing bodies, and made a licence valid anywhere in the United Kingdom. It further unified the profession by placing the entrances to it under the guardianship of one General Council." With this statement of the good results of the Act, occupying two pages out of sixteen, Mr. WHITE'S illustration of the good working of the Medical Act ceases, and he begins a most striking illustration of the faults and defects of the Act and of the Council which it created, and by which it must be mainly judged. This illustration is given obviously with so little design of injuring the Council, and with such simplicity of detail and history as to be the most convincing proof, if any were needed, in addition to the evidence now before Her Majesty, of the absolute necessity of a Council differently constituted from the present, if the work of medical education is to be advanced, and if medical boards are to be delivered from the great stigma of acting unequally in the three divisions of the kingdom. Mr. WHITE says: "But it soon became evident in many ways that the Act.....was failing to realise all the hopes of its promoters, or to satisfy the demand for medical reform. Fault was found with the working of particular institutions; defects were shown in the general system established by the Act. The diplomas issued by some of the bodies were said not to prove that amount of fitness for practice which they professed to guarantee. The examinations on which they were granted were pronounced insufficient, and the machinery provided by the Act for putting a stop to such laxity of licensing, when brought to the test of experience, was declared to be ill-constructed. For the Medical Council had been given by the Act no direct control of the licensing bodies," &c. The Council had of course its defence and explanation ready. "But whatever the Council's justification, the fact remained that some of the bodies were generally believed not to examine thoroughly in the subjects in which they licensed. Further, the diplomas were nearly all 'half diplomas,' and the provisions of the Act for encouraging the voluntary combination and co-operation of the bodies in giving complete diplomas were not satisfactory. Even the three bodies which did so combine continued to grant their half diplomas separately." Then comes the great demonstration of the Council's inadequacy to deal with such evils. It became alive to them as early as 1867, and for several years, under the lead of the lamented PARKES, and stimulated from without by Mr. SIMON, passed resolutions and adopted reports setting forth the inequality of examinations, and the *halfness* of diplomas. In 1870, by a majority of seventeen to one—the dissentient being Sir DOMINIC CORRIGAN,—the Council passed a resolution in favour of the establishment of a joint examining board in each of the three divisions of the kingdom. So earnest and unanimous was the Council then, that on its recommendation the Government brought in a Bill making a single board in each division of the kingdom compulsory. Since then the Council has changed its own mind. Under the influence of Dr. WOOD—according to Mr. WHITE—but according to our view, under the influence of a much more dominant intellect and character, that of Sir ROBERT CHRISTISON—all Scotland backed out of its support of the Conjoint Scheme. Ireland followed suit. So that whereas in 1870 only Sir DOMINIC CORRIGAN—a free lance by general consent—voted against compulsory Conjoint Boards, in 1878 ten voted against them. Of the ten, nine represented medical authorities—namely, all the Scotch authorities without exception, and all the Irish authorities except the Apothecaries. The tenth opponent of the resolution was the Crown Nominee of Scotland. On the showing of Mr. WHITE, then, on the main question of medical reform, the Medical Council is a house divided against itself, and too much concerned with local interests and views to put the question of licensing medical examinations on a national basis. In plain terms, the history of medical reform in the last fourteen years has been a history of failure—a history of nineteen bodies out

of sympathy with the profession, several of which are superfluous, striving to perpetuate themselves and all their individual privileges, without reference to public advantage, and the question of justice to those on whom exacting examinations and fees are imposed. In the next few weeks we shall try to give our readers some account of the evidence of the witnesses before the Commission on the principal questions involved in medical reform, and which must soon engage the attention of Her Majesty's Government.

SOME experiments carried on during the past year by Professor H. NEWELL MARTIN, and described by him in a paper published in the Transactions of the Medical and Chirurgical Faculty of the State of Maryland, appear to be of great value in determining the effect of variations of blood-pressure upon the pulse-rate. When it was shown that by increasing the pressure in the arteries the pulse was slowed, it was assumed that the greater force to be overcome by the ventricle entailed a longer systole, and that the result was the direct effect of the pressure upon the muscular tissue of the heart. The discovery that there is in the medulla oblongata a cardio-inhibitory centre which is stimulated by increased blood-pressure, and also a cardio-accelerator centre stimulated by lessened blood-pressure, and that the effects described by MAREY were to be traced to the action of these centres, rendered necessary further investigations to determine whether variations in blood-pressure have any direct influence upon the pulse-rate. The results obtained by such trustworthy observers as HEIDENHAIN, LUDWIG, v. BEZOLD, and others, have been found to vary so greatly that no reliance whatever can be placed upon them. Professor MARTIN has, by eliminating apparently every source of error, arrived at constant and decided results, which also serve to explain the contradictory statements of previous observers. His mode of procedure is as follows. The animal—a dog—having been tracheotomised, placed under curari, morphia, or chloroform, the common carotid arteries are tied, and cannulas placed in their central end. Artificial respiration is then established, the front and sides of the chest removed, and the two subclavian arteries are tied below the origin of their first branch. One limb of a curved metal cannula is then introduced into the aorta, and thus all circulation through the systemic arteries except the coronaries is blocked. The two venæ cavæ and the vena azygos are tied, and a large tube in communication with a flask of defibrinated blood is introduced into the superior cava on the cardiac side of the ligature. The carotids are then opened, and all the blood in the heart and lungs is washed out by the defibrinated blood. While this is being done a thermometer is placed in the left subclavian artery. The animal is then transferred to a warm moist chamber; the superior cava is connected with a MARIOTTE'S flask, from which defibrinated blood under a known and easily regulated pressure enters the vein and the right auricle. The blood flowing from the aorta is collected in another similar flask. The venous pressure can be altered by raising or lowering the MARIOTTE'S flask, and the arterial pressure can be increased or diminished by elevating or lowering the exit point of the tube connected with the aorta. All being ready, arterial pressure, as measured in the carotid, was varied between the limits of 40 mm. and 210 mm. of mercury, and tracings taken of it and of the pulse-rate. Although this was done repeatedly, and both suddenly and gradually, it was found to in no way influence the pulse-rate, which gradually and uniformly fell. If the venous and arterial pressure were coincidently greatly increased, the character and rapidity of the pulse were profoundly altered. If while the arterial pressure was kept constant, the pressure in the vein was altered by raising or lowering of the MARIOTTE'S flask, in the same way the pulse-rate underwent no change. The experiments, which were often repeated, curari, morphia, and chloroform being used in turn, so as to exclude any effect of these agents, show that alterations in the blood-pressure, either arterial or venous, do not directly affect the pulse-rate.

In a further series of observations Professor MARTIN maintained the blood-pressure in both vein and arteries at a constant level, but varied the temperature of the defibrinated blood supplied to the heart, and he found that the pulse-rate rose with every increase in the temperature of the blood, and fell as it cooled. The fact that the pulse quickens with rise of temperature has of course long been familiar, but it was explicable upon two theories. The hot blood might act directly upon the tissue of the heart, or, paralysing the cardio-inhibitory centre in the medulla oblongata, influence the heart indirectly. MARTIN has now shown that a dog's heart, completely liberated from all possible influence of nerve centres outside itself, slows its rate of beat from minute to minute, as the temperature of the blood sent through the coronary artery falls, and quickens its beat as the temperature rises; and it has yet to be proved that the increased frequency of the pulse in the febrile state is in any way dependent on paralysis or excitation of the cardio-inhibitory or cardio-excitor centres in the medulla. In attempting to find the extremes of temperature compatible with cardiac life, it was found that a dog's heart would beat regularly and slowly at 26° C., and regularly, but rapidly and feebly, at 41° C.

Professor MARTIN shows how his investigations explain the results of other observers labouring at the same problem. For example, v. BEZOLD in some experiments on curarised rabbits, with all extrinsic cardiac nerves divided, increased the blood-pressure in one of three ways. He either raised the hind part of the animal, and so pressed blood from the belly to the heart; or, after opening the chest, he clamped the aorta just beyond the origin of the left subclavian artery; or he injected into one carotid calf's blood carefully warmed to 38° C. By each of these methods not only was the blood-pressure increased, but the temperature of the blood in the heart was raised, and so the increased frequency of the pulse was produced. In the first experiment, abdominal blood, nearly 2° C. hotter than that in the external jugular vein, was forced back to the heart in excess. In the second experiment, when the aorta was clamped, the blood forced into the aorta returned from the head and fore limbs much faster than before, and a larger amount of blood flowed through the lungs in a given time, and as only the same amount of cool air was pumped into the lungs by artificial respiration, the blood was much less cooled; or, in other words, the blood then reached the coronary vessels hotter, and so raised the pulse-rate. It has been shown that one effect of curari on the dog is to lower the

temperature of the venous blood 3° C. Assuming that the effect is the same in the rabbit, the calf's blood at 38° C. introduced into the carotid artery in the third experiment, was 3° C. hotter than that in the veins, so that here again the means taken to raise the blood-pressure also raised the blood-temperature. Professor MARTIN has been successful in eliminating this source of error, and has apparently reduced a complex problem to its simplest conditions, and has succeeded in obtaining results of great value and importance.

A RECENT number of the *Saturday Review* in commenting on Professor ATTFIELD'S address at Southampton, remarks that it is astonishing how little suspicious even suspicious people are of the drugs which they take when they are ill. They are quite alive to the prevalence of adulteration in other trades, but they will swallow medicines hastily fetched from the nearest chemist's without so much as a misgiving that they are not in all respects what they profess to be. Yet in nothing is adulteration so easy or so profitable as in drugs. The taste will sometimes assist in its detection in articles of food, but in medicines it avails us no thing. Genuine drugs are often very costly, so that the gains derived by substituting other substances for them are great. In no trade are the effects of adulteration so disastrous as in that of the druggist. Adulterated food or drink provokes disease, but the adulteration of a drug snatches away the last lingering hope of recovery from the dying patient. How often is death attributed to the virulence of the disease, or perhaps to want of skill on the part of the doctor, when in reality it is attributable to the use of worthless medicines. The doctor ordered the appropriate remedy, and if actually administered it would in all probability have checked the course of the disease. But what was actually administered was not the remedy at all, but a counterfet of it, and though the patient did not detect the difference, the disease did, and the patient died. How to ensure that drugs shall be what they profess to be is one of the most important problems in practical medicine, and one to the solution of which few contributions have as yet been made.

The strictures of our contemporary are severe but they are just, and we cannot be sufficiently grateful to anyone who calls public attention to a matter which affects us so closely. But it is probable that the *Saturday Review* does not know and even doctors themselves do not realise the extent to which the practice of "sophistication," as it is conventionally called, is carried on. Much information may be derived from a report on the Deteriorations, Adulterations, and Substitutions of Drugs presented to the American National Board of Health. Powdered drugs, we are told, are almost universally inferior in quality, and it is well known that powders are commonly offered at the same price as the crude drug, notwithstanding the cost of labour and the loss occasioned in drying and powdering. Many of the official preparations are of such a character as not to bear very close scrutiny. Tinctures vary materially in quality, and are frequently made of inferior strength both as regards drug and menstruum, in order that they may be sold at a lower price. From the report to which we have referred it appears that even crude drugs are frequently adulterated. For example, much of the aconite root sold is partially or entirely tasteless, being first exhausted of its alkaloids and then redried. Of different samples of arnica examined one contained fifty per cent. of the true drug, another only ten per cent., whilst a third contained none at all. Sarsaparilla is found to be frequently adulterated with nut-galls, ipecacuanha, matico-stems, paper, bark, straw, and belladonna leaves. All the high-priced drugs are especial objects of adulteration. Of three specimens of santonine submitted to analysis, one contained mica in large quantities, another twenty-two per cent. of boracic acid, whilst the third consisted almost entirely of picric acid We know of a case where a patient suffering from rheumatic fever was given powdered sugar flavoured with quinine in place of the salicine prescribed. Quinine itself is most extensively adulterated; in one glaring instance finely picked cotton was introduced into the bottles in order to increase the bulk. It is an undoubted fact that many specimens labeled "sulphate of quinine" are destitute of the slightest suspicion of the presence of any alkaloid derived from cinchona bark. In a leading Continental city there was until recently an extensive establishment devoted entirely to the manufacture of spurious drugs, their preparation giving evidence of consummate skill. This is a subject of the utmost importance, affecting not only the honour of our profession, but the welfare and safety of thousands whose lives are entrusted to our care. No wonder that in certain quarters there is a growing disbelief in drugs when such pernicious practices are resorted to, and adulteration becomes the rule and not the exception. It is a matter calling for strict and impartial investigation, and our thanks are due both to Professor ATTFIELD and our contemporary for having brought the subject so prominently before the public.

WE publish in another column the report of the conviction of an unqualified practitioner for forging a death certificate in the case of a patient whom he had attended. Last week the Coroner for Middlesex held an inquest at the Coroner's Court, Islington, on a man who was seen by Mr. DUDLEY POWER, an unqualified practitioner. Mr. RICKETTS watched the case for POWER, and Mr. PRIDHAM for the Medical Defence Association. POWER seems to have mistaken the nature of the case, and to have diagnosed drunkenness instead of pneumonia, which was afterwards diagnosed by Mr. ROWNTREE, a Poor-law medical officer, and found, post mortem, by Dr. HERBERT JAMES CAPON. Mr. ROWNTREE said that 90 per cent. of such cases, under proper treatment, would recover. The jury, after deliberating twenty minutes, returned a verdict of "Manslaughter" against Mr. POWER for feloniously killing the deceased. The coroner issued his warrant for the accused to take his trial on that charge. The bail was fixed at two sureties in £100 each. It is noticeable that the wife of this unfortunate patient was advised to go to a public-house and get a letter for threepence for a dispensary kept by Mr. POWER. No letter was obtained, but Mr. POWER prescribed.

Yet another case in point. At Worship-street on Sept. 8th, Mr. UPFIELD, assistant to Mr. W. H. DRY, M.R.C.S., of Kingsland Dispensary, Kingsland-road, was summoned, together with Mr. DRY, before Mr. BUSHBY, at the instance of the Medical Defence Association, charged with having given a false certificate or declaration concerning the death of one HENRY JAMES AULT. Mr. PRIDHAM, solicitor, pro-

secuted for the Association. He said the summonses were taken out under the Births and Deaths Registration Act, 1874, section 40, subsection 2, and each of the defendants was liable to a penalty of £10. In the case of the death of any person who had been attended during his last illness by a registered medical practitioner, it was provided that a certificate of the cause of death should be given by this practitioner. The defendant, UPFIELD, resided at the Dispensary, 235, Kingsland-road, where he carried on the business for Mr. DRY, who was a duly qualified medical practitioner, and whose name was used in connexion with it. Mrs. AULT, the mother of the deceased child, went to this dispensary, and UPFIELD attended the child up to within a short time of its death, and to him they paid the fees which would be paid to a duly qualified medical practitioner. The child died, and UPFIELD, on being asked for a certificate, gave one to Mr. EDWIN AULT, the child's father, beginning, "I hereby certify that I attended HENRY JAMES AULT," stating that the child died of scarlatina and diarrhœa, and signed "W. H. DRY, M.R.C.S., L.S.A." Mr. DRY admitted he had never attended the child at all. Mr. BUSHBY said it did not appear that UPFIELD had represented himself to be a qualified practitioner, but at the same time the Act had been deliberately broken by both defendants, and he should impose the full penalty of £10 in each case.

It is amazing, after what happened at the last meeting of the General Medical Council, to find either a practitioner or his unqualified assistant placing themselves in such a position as that of Mr. DRY and his assistant in this case. It is probable that Mrs. AULT was under the delusion all the time that the person in attendance was Mr. DRY. It is a painful fact that, under the sham dispensary system, there is a rapid change of assistants and principals. The poor people who go can only assume that the person they see and who poses as a medical man is the principal and a qualified medical man. The deception practised is a very serious one, especially when death and grave diseases are involved. It is discreditable to our system of public prosecutions that these cases are not much more extensively exposed than they are. They cannot much longer go on without exciting the attention of the Public Prosecutor, not in London alone, but in the provinces. Why should juries and a Medical Association have the sole labour of investigating a system like this? Meantime, in the name of the public, and especially the poor, we cannot but feel grateful to the Medical Alliance Association for so effectively bringing to light an indefensible system of medical practice with which no medical man should identify himself.

DR. DIXON, the Medical Officer of Health for Bermondsey, in his annual report to the vestry, just published, gives the number of uncertified deaths during the year as sixty-six, or 3·8 per cent. of the total deaths. Forty were males and twenty-six females; thirty-eight were children under one year of age, and twelve were between one and five years. He adds: "From the use of such purely professional terms as spina bifida, pyæmia, hydrocephalus, and tabes mesenterica, it is evident that the information given to the registrars was supplied by medical students, unqualified assistants, or practitioners who were not on the medical register of persons duly qualified to practise."

Annotations.

"Ne quid nimis."

THE HEALTH OF THE PRIMATE.

THE grave apprehensions of the friends of the Archbishop have not been hitherto realised as to the result. The Primate continues to live, and to show a vitality which is apparently natural to his family. We reported on the 2nd instant a state of things which indicated the most imminent danger to his life, but the comatose state which then appeared as about to bring an end to existence has departed, and left the mind of the Archbishop perfectly unaffected. The impervious left lung has become pervious again, without the intervention of crepitation or bronchophony, whilst the pneumonia in the right has developed moderate consolidation. The insufficiency of the cardiac valves, which was very manifest before his Grace's feverish state began, has not been evident since he has kept the recumbent position, but the pulse continues frequent, varying from 90 to 100 daily; whilst the Archbishop's normal pulse was usually 72; it is of fair power, though a beat is lost occasionally. There are no cardiac murmurs now. The respiration has become gradually slower, falling from 40 to 30 per minute. The cerebral character of the respiration has departed. This was very manifest whilst the comatose stage threatened. The thrombi in the legs have nearly disappeared. The skin continues dry, as well as the mucous membrane of the mouth and throat. A few aphthous spots appeared on the tongue and the palate in the early part of the week, causing some uneasiness in swallowing; but these have departed, as well as the accompanying nausea. There is considerable emaciation, but food of an unstimulating character is taken in abundance and without any distaste. The Archbishop sleeps uneasily, but has not been troubled with much pain of any decided kind. The neuralgia in the shoulder, right arm, and back of the neck has left him.

CHOLERA AND QUARANTINE.

THE rumours of cholera and of the adoption of quarantine measures in different parts of the world remind us of a danger to which Europe is annually subjected at this season of the year, and also of a preventive measure which finds many staunch supporters in the East, but which in this country is every year coming to be regarded with diminishing assurance in so far as its effect upon public health is concerned. For ourselves, the most disquieting rumour has had reference to the presence of cholera in the Red Sea, and to the imposition of such quarantine measures upon vessels entering the Suez Canal as would seriously have hindered our operations in Egypt. The rumour, so far as the cholera was concerned, has turned out, to say the least, to have been greatly exaggerated, and it is indeed doubtful whether true Asiatic cholera was in question; so, also, the prompt intimations of our Government have prevented the adoption of measures which, whilst probably useless in themselves, would have caused a serious hindrance both to England and to other European countries. It must not, however, be forgotten that, as pointed out by Mr. Netten Radcliffe, by the opening of the Suez Canal the Red Sea has become the most ready route for cholera to enter Europe, and it was to have been hoped that some international arrangements might have been made for the proper inspection and regulation of infected and suspected vessels, which, whilst avoiding the needless restrictions attaching to the more antiquated of the so-called quarantine measures, would have provided for the security of Europe from infection by that route. There are, however, now many difficulties to be overcome before any international agreement can be expected with regard to

tais question, and, in the meantime, we may in this country fully trust to the sanitary organisation of our ports, if the authorities having control over them rigidly carry out their inspectorial duties as regards shipping, and also provide themselves with means for the isolation of the infectious sick.

MECHANICAL STIMULATION OF THE BRAIN.

VARIOUS opinions have been expressed regarding the degree to which the cortex cerebri is excitable by mechanical agencies. Few experimenters have found the mechanical excitability to be well marked. The most noteworthy results thus obtained are those of M. Couty, who described movements as produced by such stimulation of the motor region, the effect closely resembling that following electrical stimulation. He stated, also, that these movements could be increased by causing inflammation in the cortex, either by exposing it to the air for a certain time, or by the action of various irritant substances. The nervous tissue becomes a little more consistent in consequence of the inflammation, and is less easily reduced to a soft pulp by mechanical disturbance. The effects obtained by M. Couty were of two orders: movements first on the opposite side of the body; and, secondly, on the same side as the hemisphere irritated, and in certain cases movements more or less general were produced. The first of these alone are comparable to the results of electrical stimulation of the motor zone, the others must be regarded as of the nature of reflex actions—i.e., of sensori-motor nature. M. Vulpian has recently made a large number of experiments to ascertain the degree and character of the mechanical excitability of the grey cortex of the brain. In mammals, dog, cat, and rabbit, in the normal condition, he could never produce in this way the slightest movement either in the limbs of the opposite side, or in those of the same side. The mechanical stimulation was produced by rubbing the surface of the cortex with a small sponge, or a fragment of amadou, or with the points of dissection-forceps. Thus, in the dog and cat, after having carefully ascertained the points in which electrical stimulation produced movement of the face, or of the fore limb, or of the hind limb, varied mechanical stimulation was applied to the same points, but no movement could in any case be perceived. If therefore movements resulted from such stimulation in the experiments of Couty, the effect must have been purely accidental, or the consequence of some experimental error. The results were also negative when Vulpian repeated the experiments, after having produced inflammation of the surface of the sigmoid gyrus by tincture of cantharides, by essence of mustard, or by nicotine. The stimulation of the inflamed surface by various mechanical agents did not cause the slightest movement in any part of the body. Nevertheless, in Vulpian's experiments, certain effects were observed analogous to those which Couty regards as reflex, and which are produced by the mechanical excitation, not of the motor functions of the cortex, but of the sensory regions. When the sigmoid gyrus of the dog is galvanised or faradised, a certain amount of pain is produced even when the electrodes are placed a long way from the shreds of the dura mater, which are extremely sensitive. The points in this region which seem to be the most sensitive are those in which stimulation causes movement of the fore or hind limb on the opposite side, although these are far less sensitive than is the dura mater. But mechanical stimulation of these regions never, in Vulpian's experiments, caused indications of pain. Nevertheless, similar excitation of the deeper layers of the cortex, or in the subcortical portion of the white substance, usually caused unequivocal signs of suffering. When metallic wires are passed into the motor points of the sigmoid gyrus, and a faradaic current of moderate intensity is passed through them, the movements caused in the limbs on the opposite side become stronger the deeper the wires are plunged into the cerebral substance, provided they penetrate to the white substance. These movements are absolutely the same as those which are produced by faradisation of the surface of the convolution, and differ only in their greater extent and greater energy. In the same way, the pain becomes more intense when the wires reach the white substance. Thus the sensibility of the cerebrum itself is incontestably low It is, however, augmented by repetition of the stimulus and thus it is possible that pathological irritation may cause an exalted sensibility, which is evidenced by pain. It is only in the white substance beneath the sigmoid gyrus that mechanical stimuli elicit any evidence of sensibility. Elsewhere the white substance of the cerebral lobes seems to be absolutely insensible, although on this point M. Vulpian's experiments are not sufficiently numerous to enable him to speak with perfect confidence.

METROPOLITAN LUNACY.

NOTWITHSTANDING the provision of three large Middlesex County Asylums at Hanwell, Colney Hatch, and Banstead (to say nothing of the Surrey and Kent County Asylums), and of three Metropolitan Asylums for Imbeciles at Lewisham, Caterham, and Darenth, there is constant and increasing complaint among the Guardians of the Metropolitan Unions of the difficulties in which they are placed through want of accommodation for lunatics, now improperly retained in the workhouses. It appears that the subject has been under serious discussion by at least three Boards of Guardians—namely, those of Poplar, Mile-end Old Town, and Wandsworth. The present institution-provision for metropolitan lunatics and imbeciles is evidently insufficient, and bearing in mind the serious evils attending the retention of lunatics (especially new cases) in workhouses, this subject seems to call for full inquiry. It is not disputed that the county asylums are overcrowded with incurable cases, and this renders it the more important that additional accommodation should be at once provided for such cases in order to render available space for the prompt reception and treatment of new cases, a large proportion of which may be deemed curable. With regard to the accommodation provided by the Metropolitan Asylums Board, it may be stated that at the present time about 4000 patients are accommodated in the two asylums at Leavesden and Caterham, whereas not more than about 400 are yet in residence at the third asylum at Darenth. It seems a matter for regret that the Metropolitan Asylums Board do not see their way to relieve the pressure for lunacy accommodation in the metropolis by promptly rendering additional space available at Darenth.

SANITATION AT GREENOCK.

HITHERTO we have had little enlightenment in sanitary matters at Greenock, as throughout its existence the town has been chiefly noted for its neglect of all sanitary laws, for its high death-rate, and its enormous rainfall. But better days seem to have dawned of late, and few more complete expositions of the advantages of efficient sanitary legislation have been given than that offered last week by Mr. George Mackay, the Greenock sanitary inspector, in a speech to the Sanitary Association of Scotland. In 1876 the local authority of Greenock obtained special Parliamentary powers, and it has used these to such purpose that the contrast between the health record of the past and present is most instructive, and ought to be so to those armed with, or requiring, such authority in other towns where such rookeries as were found in Greenock may still abound. Taking an average of ten years, there were many densely populated places with a mortality

from 40 to 67 per 1000 of the population; the general rate was higher than that of any other large town in Scotland, the mean during the twenty-one years prior to 1876 being 31·24 per 1000. During the five years immediately succeeding the institution of an improved sanitary system the mortality sank to the less frightful rate of 24 per 1000, while in 1881 it only reached 22·14, being the lowest rate hitherto recorded in this long-suffering town. It was in infectious diseases that the greatest decrease of deaths had taken place, the quinquenial period after 1876 showing no less a reduction than 1123 as compared with the period immediately preceding that date. Mr. Mackay may well give credit to the present administrators of health matters in Greenock for their enlightened policy. It may not be amiss to point to the further fact that this is one of the few towns where the burthen of reporting infectious diseases is thrown upon the householder; and though Dr. Wallace is not satisfied, we can well see that much may be said in favour of a system which gives such excellent results, while leaving undisturbed the feeling of mutual confidence so necessary between practitioner and patient.

TESTIS IN PERINEO.

DR. S. BAUDRY has recently met with a case of the rare malformation in which the testicle, instead of descending into the scrotum, passes down into the perineum. The subject of the deformity was a new-born child, in other particulars well developed and well nourished. The right testicle was found two centimetres in front of the anus, and the same distance outside the ano scrotal raphe; it presented normal characters, being slightly smaller than the one on the opposite side; the vas deferens was readily traceable up to the external abdominal ring. This testicle was covered by normal skin. The right half of the scrotum appeared to be absent; the raphe was seen on the right side, and from it the skin continued without fold or line of demarcation to the thigh. No sign of any dartos could be found to the right of the raphe, for while cold caused distinct contraction on the left side none was observable on the right. The displaced testicle was not movable. In this the case differs from others that have been recorded, for in the accounts of such cases it is usually stated that the testicle was readily moved up into the groin, and in some it always assumed this position in sitting and walking, and all the treatment required has been to fit on some form of suspensory bandage to keep it up in the groin. Hunter was the first to draw attention to this rare deformity of the testicle, and the difficulty he experienced in accounting for it has in the opinion of pathologists not yet been satisfactorily overcome. Mr. Curling, who reports more cases than any other observer, attributes it to the action of a gubernaculum testis, of which the middle slip is attached to the perineum instead of to the bottom of the scrotum; and there is certainly much to be said for this view, the strongest piece of evidence in its favour being the fact that in a case in which Mr. Curling attempted to replace the organ he found a very firm band attaching its lower end to the superficial structures of the perineum. On the other hand, some authorities doubt whether the gubernaculum testis is the cause of the descent of the testis, and whether therefore its faulty attachment can lead to a misplaced testicle. In only a minority of the recorded cases has the corresponding side of the scrotum been absent, so that we cannot attribute the deformity to want of development of the normal receiving pouch. More frequently the scrotum is shrunken, and in two cases Mr. Curling and Mr. James Adams attempted to replace the testicle in its proper scrotal pouch. Mr. Hutchinson has seen a boy with both testicles in the perineum. Vidal observed it in two brothers. It is well known that testicles retained in the abdomen usually fail to secrete spermatozoa. Such appears not to be the case when the organ reaches the perineum; in one case Ledwich dissected a specimen, and although the organ was small and soft, its ducts were found to contain spermatozoa. The most important question is that of the proper treatment. There is no evidence to show that the testicle is in these cases specially prone to become the seat of malignant disease, nor associated with hernial protrusion. When it is movable a retentive apparatus, which keeps it out of the way of injurious pressure during sitting, riding, and walking, answers all the indications. In such a case as Dr. Baudry's, where the organ is fixed, it would be wise to wait to see whether it may not become mobile, but should this not occur it would undoubtedly require excision, as it would be constantly exposed to injury in sitting or riding. A case is recorded in which a perineal testicle became affected with gonorrhœal inflammation, and was almost incised in error for an abscess. Zeiss mentions the curious coincidence of this deformity in a boy suffering from stone in the bladder, and the misplaced testicle—the left—was only discovered when he was about to commence the operation of lithotomy. Its position was such that he was forced to cut on the right side.

THE NECESSITY FOR HOLIDAYS.

IF it were strictly true, as Dr. Fothergill assumes in a paper in the current number of that always entertaining and useful publication, *Good Words*, that "some little time ago, not more than a generation, holidays were associated with school children, and rarely did anyone of adult years talk of a holiday," that would go far to prove that the "necessity for holidays" was a demand created by supply. Such, however, is not quite the fact. It is undoubtedly true that holidays are more common than they used to be, and that they are now enjoyed by classes of the people to whom they were until recently unparticipated luxuries; but for all time it has been the practice of brain-workers to rest from their labours for a short time periodically. Those who did not do this, except in rare instances of particularly wisely ordered work or of extraordinary vigour, were compelled by an oft-recurring threat of breakdown to take the rest they would otherwise have refused. In short, holidays are a necessity, growing out of the physiological need for periods of store-replenishing, when the reserves of strength can be made up. It is impossible to lay too great stress on the fact that the economising of the buoyancy and vigour of life very much depends on the integrity of those reserves of mental and nervous force which it is the main purpose of the holiday to replenish. Mere "rest" will not accomplish this result. Every part of the organism, the brain and nervous system included, feeds as it works. There must be exercise, or there will not be appetite; and without appetite an abundant supply of food is of little avail.

BLUE MARKS AND PEDICULI.

SOME years ago the fact that blue spots or dusky spots are often observed in association with pediculi pubis was pointed out by M. Mourson, a French naval surgeon. Subsequently M. Duguet furnished a demonstration of the relation between the two by producing blue spots by means of inserting beneath the epidermis a small quantity of a sort of paste made of bruised pediculi. Hence it is clear that the pediculi pubis contain some substance having colouring properties. Further observations by M. Mallet, a pupil of Duguet, make it probable that this substance is contained in the salivary glands. By means of fine forceps the head of a pediculus was torn off and inserted beneath the epidermis of the forearm, and near it the rest of the louse was similarly interred. Next day a blue

mark was distinct around the body of the insect, but not around the head. In another experiment a small mass came away from the body of the insect with the head, and in this case the dusky spot developed around the head and not around the body. Further experiments showed that the colouring agent was situated in the body opposite the anterior pair of legs, and at this level it is known that there are two pairs of salivary glands. M. Duguet has pointed out some curious facts regarding the resistance of some persons to the action of the salivary juice and the influence of season on the colouring power of the insect. The blue spots are far more abundant in February, March, and April than in other months.

THE PARKES MUSEUM.

THE Council of the Parkes Museum have just acquired new premises in Margaret-street, Cavendish-square, to which the museum is to be removed from University College as soon as the alterations and additions which are now being made under the direction of Mr. Mark H. Judge, A.R.I.B.A., are completed. The new museum will consist of a central hall, suitable for meetings and lectures, a library and corridors, all lighted from the top, and well suited for exhibition purposes. The meetings and lectures on sanitary and other matters connected with the health of the people, which were only occasional while the museum was at University College, will form a permanent feature of the institution when it is reopened in Margaret-street. Captain Douglas Galton, C.B., F.R.S., presided at the last meeting of the Council, when a letter was read from Mr. Thomas Twining of Twickenham, in which he said: "Much as I regret that University College should lose the advantage of possessing a hygienic collection within its walls, I cannot but rejoice at the prospect now afforded us of developing the Parkes Museum in a central position, with all those educational devices which may unite the benefit of the people at large with that of the medical, architectural, and engineering student. The outset will necessarily involve considerable expenditure, but with such results in view, I should think that many liberally minded friends of sanitary progress might be induced to join in meeting this extra expense." Mr. Twining concluded his letter by offering to contribute a special donation of £100 towards these expenses. In accepting the generous offer of Mr. Twining, the Council passed a vote of thanks to him for the timely help thus rendered to them. It is expected that the museum will be reopened before Christmas. In the meantime communications may be addressed to the Secretary and Curator, Mr. Mark H. Judge, at 8, Park-place Villas, Paddington, W.

ISOLATION PROVISION FOR NOTTINGHAM.

DR. SEATON, medical officer of health for Nottingham, strongly urges the provision of a permanent hospital for the isolation of infectious diseases. The present hospital buildings, which are situated in the centre of the borough, were hurriedly erected in the face of an epidemic of small-pox some ten years ago, and they have recently served for the isolation of the same disease. But they are reported as unfit for the isolation of more than one infectious fever at a time; they are not suited to the reception of scarlet fever cases; and, in short, they do not constitute the sort of hospital provision which should be provided for the protection of public health in such a town as Nottingham. Public opinion would now appear to favour Dr. Seaton's contention; and it is to be hoped that a corporation which has already shown itself capable of meeting many public and educational wants in a way that leaves but little to be desired, will no longer defer making this much wanted addition to the means it already possesses of coping efficiently with infectious disease.

THE DISTRIBUTION OF THE HOSPITAL SUNDAY FUND.

OUR contemporary, the *Morning Post*, has opened its columns to an expression of complaint on the part of those who are not satisfied with the distribution of the Hospital Sunday Fund. "A Governor of Hospitals" supplies the following table of awards to the principal hospitals:—

Hospital.	No. of Beds.	Sum awarded.	Per Bed.
King's College	200	£1575 0 0	£7 17 6
St. Mary's	190	1012 10 0	5 6 6
University	200	1012 10 0	5 1 2
Middlesex	310	1462 10 0	4 14 4
St. George's	351	1575 0 0	4 9 8
Charing-cross	180	675 0 0	3 15 0
Royal Free	150	562 0 0	3 15 0
Westminster	215	787 10 0	3 13 3
London	800	2812 10 0	3 10 3

The writer very properly says that the Distribution Committee sits as a sort of jury on hospitals, and by its awards expresses a kind of judgment on the administration of each particular hospital. At the last meeting of the Council the inequality of the awards was alluded to in a letter by Sir Rutherford Alcock, and it was understood that the principle of distribution should be again fully discussed. We ourselves have complained occasionally that the awards were not very intelligible. It is to be admitted, however, that they have excited exceedingly little complaint among the great Hospitals themselves. A "Governor of Hospitals" complains that the London Hospital in the recent distribution got less than half what King's College received. It is nevertheless true that Sir Edmund Currie, one of the most devoted friends of the London Hospital, entirely sanctioned the last distribution, and made no complaint on behalf of his favourite institution. The distribution is made on an arithmetical basis, exclusive of legacies over £100, and the Committee are expected to consider the *merits and needs* of each particular institution: a consideration which largely takes the shape of a comparison between the expenditure on the maintenance of patients and that on expenses of management. The Distribution Committee have very ample details of information, and are generally able to give some account of their awards. But they are not likely to be indifferent to any well-grounded complaints of the working of what they are fond of calling "the arithmetical basis."

THE URINE IN INFECTIOUS DISEASES.

A SERIES of researches, chiefly by Selmy, Brouardel, Boutmy, and Gauthier, have shown that peculiar alkaloids, to which the term "ptomaines" has been given, develop in dead animal tissues which are in process of putrefaction. They present similar chemical reactions to the alkaloids which are found in poisonous fungi. Bouchard, according to the *Revue Médicale*, has suggested that, since the ptomaines only appear in tissues which are charged with microscopic fungi, it is permissible to suppose that the cadaveric alkaloids are merely the products of the "dis-assimilation" of vegetable organisms. Further, if bacteria living in the dead animal tissues produce bacteria, it is possible that the same bacteria, growing in a living organism, may produce substances analogous to ptomaines. Bacteria seem to appear in the living body in all infectious diseases. Hence M. Bouchard has endeavoured to ascertain whether, during the course of infectious diseases in the human subject, any trace of these alkaloids can be found in the urine. His observations were made on cases of typhoid fever, "infectious pneumonia," and "infectious pleurisy," whatever the latter disease may be. All were dieted and no medicines containing alkaloids were given to them; and the urine was carefully preserved from putrefaction. An analysis showed

that they contained alkaloids having all the characters of ptomaines. A series of normal urines examined, and specimens from patients suffering from pulmonary emphysema, valvular disease of the heart, presented no trace of alkaloids. The conclusion, however, is not beyond question, since M. Pouchet has affirmed that the presence of alkaloids may be constantly demonstrated in normal urine.

THE SANITARY CONDITION OF AUSTRIA.

THE Austrian Commission of Statistics, in its annual report upon the sanitary condition of the country, states that the number of hospitals is 505, with 28,466 beds, and that in the course of last year 237,772 patients were received in them, this being in the proportion of one to eighty-four of the total population. The number of lunatic asylums is 26, with 5934 beds, and the inmates last year numbered 8867; showing an increase of 7 per cent. since 1876, the proportion of men to women being as 54 to 46. There are eighteen lying-in hospitals with 1517 beds, and they received last year 16,649 mothers and 14,861 infants. The births in these hospitals numbered 15,241, of which 12 per cent. were twins and one-half per cent. triplets. The proportion of foundlings in Austria is one in 735 inhabitants, the greatest number being in Vienna and Lower Austria generally. There are in Austria fifteen schools for the deaf and dumb, with 1243 inmates, and eight asylums for blind children. It is estimated that there are outside these different hospitals 16,123 insane persons, 13,462 idiots, 20,843 deaf and dumb, and 11,730 blind. The number of thermal establishments is 220, visited last year by 150,496 persons, the Tyrol having 84 of these establishments, Styria 24, and Bohemia and Galicia 21 each. There are in Austria 4603 physicians, 2971 surgeons, 400 veterinarians, and 15,509 midwives and professional nurses, the number of medical men in Vienna being at the rate of one to every 582 inhabitants, while in some of the northern provinces there is not more than one to 10,000. The total number of deaths was 613,661, or 33 in the thousand; and of this total 13,313 died of small-pox, 4554 of measles, 15,819 of scarlatina, 15,257 of typhus, 7791 of dysentery, 348 of European cholera, 56,973 of croup and diphtheria, 56,551 of bronchitis, and 85,457 of consumption, while 10,390 came to a violent end, including 3480 suicides.

THE TREATMENT OF TYPHOID.

AT the present time the treatment of typhoid fever is an opportune subject to engage the attention of the medical societies of Paris since the French metropolis is threatened with an epidemic of most serious proportions. The subject was brought before a recent meeting of the Académie de Médecine by M. Vulpian, who is applying his experimental skill to the service of practical medicine, and has been recently endeavouring to determine the value of the anti-zymotic treatment of the disease. The question is one of extreme importance, for it must be admitted that hitherto the advance of bacterial pathology has not resulted in that increase in our power over developed disease which might reasonably have been anticipated from so considerable an addition to our knowledge of the nature of morbid processes. There is strong reason to regard typhoid fever as of parasitic origin, and from this naturally follows an expectation that good may be done by germicide remedies which may reach the intestine without losing their influence. Nevertheless this method of treating typhoid fever has hitherto found little favour at the hands of practical physicians. Proceeding upon these lines, M. Vulpian has tried in turn iodoform, which caused only disgust; salicylate of bismuth, which, although of a certain efficacy, seemed to favour the occurrence of certain complications, such as dyspnœa and nasal and intestinal hæmorrhages; boracic acid, which turned out as useless as iodoform; and, lastly, salicylic acid, to which M. Vulpian wished to draw the special attention of the Academy. It may be remembered that this was largely tried, especially in Germany, several years ago, but generally relinquished as being either useless or positively injurious. M. Vulpian found that when it was given in small doses, as one, two, or three grammes in the twenty-four hours, the results were almost *nil*, but if a quarter of a gramme was given every half hour, so that the patient took in the day about six or seven grammes of the pure acid, he believed that there followed an amelioration in the course of the disease both marked and lasting. Some patients presented the accidents of salicylism-delirium, which quickly subsided when the drug was discontinued, or a little albuminuria, but these were exceptional. In most cases these doses were well borne, and the beneficial influence of the drug was shown in improvement of the general condition and of the mental state, and especially in a fall of temperature, which had a permanence not observed with other antipyretic remedies, such as carbolic acid. These results are in striking contrast to those obtained by other physicians who have tried salicylic acid in typhoid. M. Germain See, for instance, declared that he had never observed a true and lasting defervescence to be obtained by its use, but only a transient fall of temperature of a few tenths of a degree. It remains to be seen whether the results obtained by M. Vulpian are not due to the series of cases thus treated having been of a mild type. The difference in epidemic severity is a fertile source of fallacy regarding the treatment of typhoid. Experimental physiologists are often apt to draw hasty and untrustworthy conclusions on points in practical medicine.

DEATH OF A MEDICAL MAN FROM CHLORAL.

THE *Hertfordshire Mercury* gives the report of the inquest on the death of Dr. G. A. Towers, in his eightieth year, of Sele Cottage, North-road, Hertford, the son of Mr. John Towers, an eminent horticultural chemist, and a direct lineal descendant of Dr. Samuel Towers, a distinguished physician and chemist of the seventeenth century. Dr. Towers, after his apprenticeship, tried business on the Stock Exchange, but not being successful, reverted to the study of medicine, and finally graduated at St. Andrews. He was a man of various talent, given to music, painting, photography, horticulture, &c. He was the first resident medical officer of the County Infirmary, and the friend of Drs. Davies, Furnivall, and other physicians of Hertford. It is lamentable to record that Dr. Towers came by his death through an overdose of chloral, a drug to which he was much addicted. Mr. Odell said at the inquest that the deceased had told him that he had taken as many as 180 grains. It is bad enough for any person to drift into such a habit, but in a medical man it is much worse. He must know the tendency of it to be only evil, and his example is likely to be so much the more injurious.

ALONE.

A DISTRESSING case of suicide committed by a boy ten years of age, while in his bedroom, to which he had been sent as a punishment, draws attention once again to a practice on which we have often commented adversely—namely, that of leaving children, young persons, and the weakly or troubled in mind, *alone*. The solitary state is abhorrent to the nature and mind of man. Whether the brain be immature in its development or morbid in its state, it is wrong in a scientific sense—that is, opposed to the laws and teachings of physiological science—to leave it alone. The possibility—we will even concede the probability—of a subsidence of excitement is not a sufficient set-off against

the dangers of a self-destructive intellectual activity. The mind always works to its own injury when it works alone. Reflection, introspection, and self-examination are essentially abnormal processes. The proper action of mind is on the outer world, or on such conceptions of fact and object as may be readily corrected by present observation or experience. Abstract processes of thought are never safe for the young or the weakly and troubled in mind. Healthy activity, so far as these two conditions of mind are concerned, is directly relative. It is not good for man to be alone in any sense. We would therefore again protest against the recourse to solitary confinement as a punishment for children, and against "seclusion" in any form for the unsound of mind. The two methods of treatment stand on the same footing, and they are both equally bad.

THE INOCULATION OF SYPHILIS.

A FEW weeks ago we directed the attention of our readers to the interesting observations which have been made in Germany, of the frequent association of bacteria, fairly definite in characters, with the tissue changes produced by syphilis, and we pointed out that the relation between the organisms and the disease cannot be more than probable until culture experiments and inoculations shall have given some positive results. The subject has been further investigated by a French syphilographer, M. Martineau, but it may be doubted whether it has been advanced by his researches. His search for organisms in the blood, chancrous induration, and cutaneous manifestations of the disease has been fruitless, but another method of procedure has led to results which he regards as more definite. A recently excised chancre was placed in a closed vessel which had been previously heated to a red heat. A concentrated "bouillon" was prepared and boiled for about two hours. It was then placed in a flask with a long neck, the temperature was lowered to 30° C., the chancre was introduced, and the neck of the flask was sealed at the lamp. The liquid was found, next day, to contain numerous bacteria of a special form, and a day later some of it was injected into the peritoneal cavity of a pig five months old. In a month seven or eight prominent papules appeared on the abdomen, followed by others. A few days afterwards conjunctivitis appeared in one eye, and a tumour on the penis. For the sake of comparison another pig was inoculated with pus from a syphilitic chancre, with the result of causing an eruption exactly similar to the first. Some bacteria were found in the blood of the second animal, and were injected into a third pig, a goat, and a monkey, but without result. The blood of these animals presented no bacteria. M. Martineau thinks that the cutaneous affection observed on the first two pigs presented the characters of a syphilitic eruption, and he concludes that syphilis is transmissible from man to the pig, but not from it to other animals, nor to other animals from man—a conclusion for which the facts of his experiments certainly give him only the most slender basis. His operations are to be reported on by a committee composed of MM. Bouley, Pasteur, Fournier, and Lancereaux.

DEAFNESS IN SCHOOLS.

THIS is a matter of considerable moment. There seems to be some ground for supposing that deafness is more common among children than the cases recognised would imply. At Washington, in the United States, an inquiry has been instituted with the result of discovering a notable proportion of instances. It would be well if tests were applied in the schools of this country—to ascertain the facts, and, if these should be adverse, to try to discover the reason why, and the mode of preventing what is one of the most troublesome and depressing of common calamities.

THE HABITUAL DRUNKARDS ACT.

THE office of Inspector of Retreats under the Habitual Drunkards Act cannot be a very lively or satisfactory one, owing to the want of anything particular to inspect. In the inspector's second report, just issued as a Parliamentary paper, only two establishments were reported on: the original one, Hall Court, Cannock, Staffordshire, and Tower House, Westgate-on-Sea. The first, with accommodation for ten male patients, was closed during the year in consequence of a want of harmony between the licensee and some of his patients; it has been opened since. At the Tower House, Westgate-on-Sea, six patients were admitted and two discharged, leaving four on the books on December 31st. The inspector fears that public-houses in the vicinity of the Retreats will give trouble, especially where there are not extensive grounds for recreation or a sufficiently large staff for purposes of discipline. He reports that some patients have done well up to the day of their leaving the retreats, but that in some cases they have immediately on their discharge given way to their prevailing vice; others have obtained drink during their very residence. Was there ever such an impotent piece of legislation as this? The result may satisfy those who prefer freedom to sobriety; but it can satisfy no one else to know that the habitual drunkard is still his own master, or rather the uncontrolled slave of his own vice.

THE CHAIR OF SURGERY AT ABERDEEN.

DR. PIRRIE has for so long a time been such a prominent member of the professional staff of the University of Aberdeen, that his retirement cannot but be regarded as an event of considerable importance. While some will be found to regret that he did not continue labouring in the field in which he had been so successful, we fancy that many more will be glad that he has not put off the day of retirement until the infirmities of age by incapacitating him for his duties have left him no choice. Dr. Ogston, Dr. Forbes Moir, Dr. Ogilvie Will, and Dr. R. J. Garden are candidates for the chair. But it has attractions for others besides "local" men, and we learn that Mr. Cantlie, of Charing-cross Hospital, a very distinguished alumnus of Aberdeen University, who is very favourably known in London for his marked ability as a teacher, is also in the field, and will no doubt prove a formidable rival.

PRESCRIBING DRUGGISTS.

THE recent address of Dr. Attfield has given rise to various suggestions, not all original, as to the line which should distinguish those who prescribe medicine from those who compound and dispense it. We shall not range ourselves on the side of the unpractical, and say that this line should be absolute. Medical men will not quarrel with it if it be not carried too far. The public must be its own judge in the matter; but the more the public knows and becomes intelligent about disease, the more it will see the real economy of having the best opinion upon it that can be got. The prescribing work of chemists is the foil to set off the more cultivated work of the medical practitioner. We speak in no bombastic spirit. Disease is often puzzling enough to medical practitioners. It must be still more to those who have had no medical education. Of all suggestions on this subject that is the most pernicious which would give chemists a smattering of medical knowledge. Let us have no revival of the inferior half-fledged doctor. Let us have one thing or another—a chemist or a doctor. There is plenty of imperfect medical education already. We do not want any more superficialness or sham. The public would be injured most seriously by the success of any such proposals If knowledge of disease is thought to come to chemists by reading the pre-

scriptions of others, let it be so; but let us not give any public sanction to the notion that a "smattering of medical information" imparted to a chemist will make him a doctor.

RAILWAY WHISTLES AND WHISTLING.

WE quite agree that there is far too much whistling on railways; but it is not true, as stated in a paper read by Mr. Price Edwards before the British Association, that "a low note would be equally efficacious for railway purposes as a high one," because "given the same initial intensity in the production of two sounds—one of low, the other of high pitch—there would be little difference between their penetrating powers at long distances, and none at all at such distances as sounds are required to be heard for the purposes of signalling." There is some begging of the acoustic question in the way the proposition is stated; but setting that aside, it is notorious, and capable of demonstration, that a flat note does not penetrate so well as a full one of the same pitch, and all sounds have a tendency to fall flat as well as to be less distinctly heard as they traverse space. In other words, the trajectory of the sound-wave falls flatter as it is prolonged. It follows that a low sound which has naturally a low trajectory will become flat sooner than a high one. If whistles are to be heard, and it is essential they should be, at great distances, they must be high-pitched. Meanwhile public health and happiness demand that there should be as little use of the railway whistle as possible.

DEATH FROM CHLOROFORM.

MR. COLLIER, Deputy Coroner for East Middlesex, held an inquest on the 7th inst. on the body of Mr. Francis Mellish de Putron, aged fifty-eight, a builder, of 3, Lower Gray-street, Silvertown, who had died under the influence of chloroform. It was stated that the deceased had been suffering from cancer of the tongue, and had attended the London Hospital for the purpose of undergoing an operation. Mr. Basil Wood Walker, house-surgeon at the hospital, said that the deceased was admitted on the 16th of August, suffering from cancer of the tongue, and it was decided that, with the consent of the deceased, an operation should be performed. On Sept. 4th chloroform was administered to him by witness, and it was not considered necessary to examine his heart. While under the influence of the chloroform he struggled, which was usual with persons when it was administered. The pulse then stopped, the deceased became livid in the face, and he commenced gasping. Restoration was tried, but without effect, and the operation was not commenced. Death ensued between five and ten minutes from the time the chloroform was first administered. The cause of death was failure of the heart's action, and the jury returned a verdict to that effect.

THE THAMES AS A GUTTER.

FILTH is thrown into the gutters of streets running through low-class neighbourhoods by persons having no exalted sense of the duties of good citizenship, and the agents of the Corporation of London and the Commissioners of Sewers discharge the contents of street gullies or gutters into the Thames. That highly respectable, if not very poetical, or even classic river is therefore little better than a gutter for the metropolis, so far as the uses to which it is put by the authorities above mentioned are concerned. It is not much good to protest, because the offenders are corporate bodies, and such organisations work their will at all costs and against all objectors. Nevertheless, we echo the suggestion that the Corporation and Commissioners of Sewers of London should be respectively summoned before the Lord Mayor, and, if possible, fined ten shillings and costs, with the view of bringing them, if possible, to their senses.

DR. PUSEY.

DR. PUSEY'S condition is less satisfactory. His age is eighty-three, and gradual and increasing debility is the only feature in the case. His mind is perfectly clear.

VACCINAL MICROCOCCI.

M. STRAUS presented to a recent meeting of the Société de Biologie a series of microscopical preparations of the vaccinal pustule from the calf, at different stages of its progress, in which the presence of the special micrococcus could readily be observed. The method of preparation adopted was to place the excised fragments of skin in absolute alcohol, to cut sections and stain them by the method of Weigert, which consists of tinting with methylamine violet, and then discolouring them until only the nuclei, the bacteria, and micrococci remained visible. Under a strong magnifying power the latter were visible as extremely minute points, tinted blue, about a thousandth part of a millimetre in diametre, and grouped in colonies. They were seen in the borders of the inoculation wound, and in the Malpighian layer, and subsequently could be traced passing into the subjacent cutis, especially in the lymphatic spaces. The multiplication and extension of the organism seemed to coincide closely with the development of the pustule.

LONGEVITY OF AMERICAN DOCTORS.

AT the annual meeting of the Massachusetts Medical Society, held in Boston last June, the secretary read the names of Fellows deceased during the preceding year. They numbered 33. Of those, 13 had attained the age of sixty-five and upwards; 9 were seventy and above; 3 were respectively eighty, eighty-one, and eighty-eight; while the Nestor, Dr. Ebenezer Smith Phillips, admitted a Fellow in 1837, died the 28th of last May, aged ninety.

COMPULSORY VACCINATION IN ZULU.

OUR correspondent quotes the *Cape Mercury* as stating that the Zulu King Panda, twenty years ago, had himself and his son Cetewayo and all his subjects vaccinated by a medical man whom he sent for from Natal. We cannot despair of a royal family, even of savages, that can act with an enlightenment that would put to shame some of the members of our own House of Commons.

A CONSIDERABLE addition to the present water-supply of Hawick is all but completed. Some time ago a new system of sewerage was adopted, which necessitated the use of a quantity of water so great that the old supply from the river Allan was insufficient, while the rapidly increasing population of the town demands that prompt measures should be taken. A tributary of the Allan has now been requisitioned, and upon it, at an altitude of nearly 700 feet, a twenty-acre reservoir has been formed. The town will now have a certain daily supply of sixty gallons per head to the present population, so that another extension is not likely soon to be required. The recent operations, without ground charge, will cost over £14,000.

WE observe that Charing-cross Hospital had the honour, on the occasion of the recent examination for commissions in the Indian Medical Service, of turning out the first and second men. Mr. Albert Leahy, F.R.C.S. Eng., at present assistant-surgeon to the Royal Westminster Ophthalmic Hospital, and Mr. W. W. Webb, M.B., C.M., may be congratulated on gaining for themselves and their hospital the first two places out of no fewer than forty-two candidates.

A CAPACIOUS new gallery, erected from the drawings of the College architect, Mr. Alfred Waterhouse, has just been added to the Anatomical Museum of the Medical School at Owens College. The new gallery, in uniformity with the two already constructed, goes entirely round the building, and arrangements will shortly be made for filling it with classified specimens. The building has also been covered with a new roof of skylights, by which means a considerable advantage has been gained by securing additional light throughout the Museum.

THE metropolitan Medical Colleges and Schools will all open on Monday, the 2nd of October. At King's College there will be an address by the Right Hon. W. H. Smith, M.P.; at University College an address by Dr. Marcus Beck; at the Middlesex Hospital Medical School by Dr. Robert W. Lyell; at St. Mary's by Dr. Chambers; at St. Thomas's by Dr. Sharkey; at Westminster by Dr. de Havilland Hall; and at St. George's by Dr. Herbert Watney.

THE Sanitary Authority of Wednesbury has deemed it necessary to open eight of the hospital tents to receive small-pox patients, who are to be attended by a special surgeon from London. During the past fortnight there have been sixty fresh cases and seven deaths. The utmost is being done to stamp out the disease by means of isolation and disinfection.

WE direct attention to an appeal in another column by Dr. A. P. Stewart and Dr. Glover in what seems a very hard case. If ever the providence of medical men is to be excused for being at fault, it is when overtaken by the calamity of insanity as in this case, where two sisters have to maintain themselves and an insane brother.

ADDED to the other discomforts experienced by our soldiers at the Kassassin camp, it is stated that the place is becoming more and more unhealthy, that diarrhœa prevails to a very disquieting extent, and that dysentery is on the increase. Already a large number of men have been sent back to Ismailia.

NOTWITHSTANDING the great extensions that have been made, and the precautions taken by the authorities, small-pox appears to be spreading in Cape Town and its environs. Much alarm is consequently evinced by the inhabitants. The disease has been clearly traced to the docks.

THE phylloxera has been ravaging the vineyards of the Department of Seine-et-Marne, and to such an extent as to lead to the supposition that the vines must have been under attack for the last four or five years.

AN official despatch from Manilla states that 103 persons died of cholera at that place on September 10th, the number of deaths in the province being 237.

TYPHOID FEVER AT BANGOR.—At a recent meeting of the Bangor Local Board of Health, it was decided, owing to the extension of the outbreak of typhoid fever in the district, to erect hospital tents, the accommodation provided by the temporary isolation buildings having proved quite inadequate. The Bishop consented to their erection in his park. With respect to the water which has been so strongly condemned by the medical officer of health as containing fever germs, a report was read from Dr. Muter, South London Laboratory, who, on behalf of the Board, had analysed six samples taken at points where the fever was most virulent. All of these, with a single exception, were reported to be of good quality and drinkable.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS TO THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Uxbridge Rural District.—The occurrence of an interesting outbreak of enteric fever at Norwood in the Uxbridge rural sanitary district has been investigated by Mr. W. H. Power. The outbreak occurred in December last in a terrace consisting of thirty artisans' houses, and situated near to Norwood village. For years past Norwood had been free from enteric fever, hence a sudden outbreak of this disease in fourteen out of the thirty houses in Harwood-terrace led to some alarm, and it was locally supposed to have been produced by the emanations from a species of manure deposited on the canal side near by, and which consisted largely of the refuse and garbage from London dustbins. But it became at once evident that an outbreak marked by such suddenness and magnitude could not be due to any long-standing cause of this sort, and Mr. Power set himself to work in order to differentiate the circumstances of the houses and persons attacked from those not attacked. The localisation of the disease was curious. Of fifty-one persons living in twelve houses at the lower end of the terrace not one was attacked, whereas out of ninety-seven persons residing in seventeen houses at its upper end as many as thirty-five, or at the rate of 36 per cent., suffered from enteric fever; and, further, a few of the cases were found to have occurred in the previous August and September, and then after an interval of two months there occurred a sudden outburst simultaneously affecting twelve out of the seventeen households. All the various methods by which the infection of enteric fever can be conveyed were then examined in detail, and it became apparent that the infective material from the earlier cases had probably been fostered within the limited area of the upper end of the terrace, and that it had become suddenly operative towards the end of November. The first cases had been treated at home, and their excreta had passed into cesspools, one of which was provided for every two houses, the whole being linked together by overflow pipes. But there was no communication between the interior of the dwellings and these cesspools, and the suddenness of the outbreak pointed rather to milk or to water as the medium of infection. Milk as a cause could readily be set aside, and nothing remained but water. The terrace was said to be supplied from four pumps having four separate wells. One had for some time been out of order, and the houses to which it belonged were supplied from one of the others. But this only reduced the wells to three, two out of which had supplied the infected houses, and it was not easy to see how two wells, separated as they were by a considerable interval and by a brick wall, could have become simultaneously infected. The story, as told by Mr. Power, is a long one; it is illustrated in its very complex details by a diagram of the locality in question, and as a record of a piece of careful scientific work, and of an excellent example of the value of inductive reasoning as applied to investigations of this sort, it is well worthy of study. Mr. Power finally came to the conclusion that the disease could be accounted for if the two implicated pumps drew from one well, instead of from two as he was assured they did, and with a view of being certain as to this, local examination was made, with the result of finding that the suction pipe of the two pumps did, as a matter of fact, lead to one single well. The infection of this single well was soon explained. Just prior to the sudden outbreak a cleaning out of cesspools had been inaugurated, and the contents of one, which had been infected by the early attacks in August and September, were transferred into a newly dug hole distant from the site of a supposed well, but near to and on higher ground than the situation where the now implicated well was actually found to be. Soakage from the cesspit hole would also naturally be carried in the line of natural soakage to the well in question. Thus specific pollution of the well took place, and hence resulted the sudden outbreak of enteric fever in the majority of the houses resorting to it, whilst houses close by and having another supply entirely escaped.

Ulverstone Urban District.—The sanitary district of Ulver-

stone, near Morecambe Bay, has some 10,000 inhabitants; and in 1881 there occurred in it fifty-two cases of enteric fever and eight deaths. By far the majority of the cases were concentrated in what is known as the Lightburn district, the remainder being scattered about the town. Mr. Spear, reporting on the outbreak, examined thoroughly into the sanitary circumstances of the population, and arrived at the conclusion that water pollution was the cause of the disease. The town is supplied from the Barrow Corporation Waterworks; but the water thus delivered was so turbid and had been so much complained of that many resorted to other supplies. Close by the Lightburn district, a supply, apparently pure, was available, and it was much resorted to. It was a spring largely fed by surface water percolating the sand and gravel beds of the neighbourhood. But its main feeder was crossed at different points by sewers, and prior to the main outbreak, and during a violent storm of rain, these sewers were known to have been running full under great pressure, so that their contents probably passed into the surrounding soil. And not only so, but this very storm of rain had led to a rush of storm water down a road past a privy containing typhoid evacuations, and thence into the water-supply. Here appeared to be the main cause of the outbreak. As regards the more scattered cases, very similar conditions were found; for many, avoiding the company's water, resorted to suspicious sources—as, for example, a stream, which above the point of intake ran through gardens manured with nightsoil and in close proximity to privies. But at the same time it seems, according to the report, impossible altogether to exonerate the Barrow Corporation water from some share in the mischief, for Mr. Spear reports conditions which fully justify the suspicion with which this water was locally regarded. Thus one reservoir is mainly supplied by streams draining moorland; but they also drain cultivated and manured fields; they are unprotected from chance pollution by man and animals; and the sewage of at least two farmhouses finds its way into them. Grave neglect connected with the privy accommodation of the men employed in connexion with the works is also reported to have led to excrement finding its way into the bed of what afterwards constituted the reservoir. The disclosure of these circumstances has, however, apparently led to their being efficiently dealt with; and it is to be hoped that the Ulverstone people may now be able, without any fear of ill results, to resort to the company's water, instead of falling back upon local sources, which appear to be highly dangerous.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hastings (*Urban*).—A report recently issued by the medical officer of health for the borough of Hastings estimates the present population of this urban sanitary district at 44,239 persons, showing an increase of nearly 2000 upon the number enumerated at the census in April, 1881. This report relates to the three months ending June last, and its statistics imply the satisfactory sanitary condition of the borough during the quarter under notice. The gross annual death-rate did not exceed 16·5 per 1000; the medical officer, however, estimates that 14·8 per 1000 would more correctly represent the true death-rate of the town. This lower figure is arrived at by the exclusion of 28 deaths of non-residents, and the addition of 9 deaths of town residents that were recorded in the workhouse and sanatorium, situated outside the boundaries of the borough. In order rightly to estimate whether the lower rate more truly represents the mortality of the Hastings population, it would be necessary to know the medical officer's definition of "non-residents," and how their deaths are identified in the death register. It should, moreover, be borne in mind that the enumerated population of such a watering-place as Hastings would always include a large proportion which, on the same principle, would be classed as "non-resident," for which no correction is made in the estimated population used for calculating the death-rate. However, whether judged by the gross death-rate or by the corrected rate, the mortality statistics of this borough for the quarter under notice are of an eminently satisfactory character. If we except the somewhat fatal prevalence of measles and whooping-cough during the spring, the town appears to have enjoyed an almost complete immunity from zymotic fatality. Infant mortality, generally low in Hastings, was, however, above the average during the spring, owing to the excessive death-rate from diseases of the respiratory organs and the fatal cases of measles and whooping-cough. The medical officer does well in his report to impress upon the resident householders the primary importance of the sanitary arrangements of the individual houses. We have little faith, however, in the individual action of householders without constant activity on the part of the local sanitary authority, including house-to-house visitations. The public, too, would be wise to insist at watering-places upon satisfactory evidence that the sanitary arrangements of lodging-houses are free from obvious defect. One feature of the Hastings report, which affords the strongest evidence of the abnormal constitution of the borough population, is the fact that the birth-rate was so low as 24 per 1000.

Newcastle-upon-Tyne.—According to Mr. Armstrong's report, this borough had a population of 145,675 in the middle of 1881; the births represented a rate of 36·6, and the deaths a rate of 21·7, per 1000. Amongst the deaths due to the specific fevers, there were 52 from scarlet fever, 38 from enteric fever, and 20 from typhus. The use of the fever hospital belonging to the sanitary authority is entered into in some detail. It is an old building which has done admirable service; but it is evidently quite unsuited to the requirements of a sanitary authority for such a borough as Newcastle. Indeed, it would appear that, apart from a detached shed, there is only accommodation for the safe treatment of one disease, and yet as many as 69 cases of typhus, 30 of enteric fever, and 72 of small-pox have been received into it during the past year. This evidently accounts for the almost entire absence of scarlet fever cases under isolation. Mr. Armstrong heard of 162 cases of this disease, but only eight were removed to the hospital, and he admits that under existing circumstances the isolation of this disease remains a dead-letter. For several years past measures have been under consideration with a view of dealing properly with this question, but the subject has been again and again put off. The value of such an institution need not be pointed out to the inhabitants of a town which was one of the earliest to provide itself with such a hospital; but something seems wanted to do away with the recurring delays which hinder the efficient action which should be taken with regard to infectious disease in the borough. The story of the outbreak of typhus is interesting. As usual, this disease appeared among the destitute in old and ill-ventilated tenements; it appears to have been promptly dealt with, and isolation of the patients in hospital secured either voluntarily, or, in one instance, by compulsory removal under a magistrate's order. The connexion of enteric fever with the condition of old midden-privies, faulty both in point of construction and as regards scavenging, the presence of autumnal diarrhœa as affected by temperature, rainfall, &c., and many other points, are fully dealt with in the report. One special feature has of late years rendered Mr. Armstrong's reports specially instructive; it is the preparation of a map, on which are marked by dots of different colours all the cases of scarlet fever, enteric fever, typhus, small-pox, and whooping-cough, according to the locality in which they are reported; and it is satisfactory to note that nearly all such cases are voluntarily notified to the officer of health. Thus these maps, when studied year by year, afford a valuable indication of the localities in which the various forms of sanitary work are most needed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5660 births and 3222 deaths were registered during the week ending the 9th inst. The annual death-rate in these towns, which had been equal to 22·7 in each of the two preceding weeks, declined last week to 19·9. The lowest rates in these towns were 13·6 in Leicester, 15·6 in Bolton, 16·2 in Bradford, and 16·3 in Huddersfield. The rates in the other towns ranged upwards to 24·2 in Newcastle-upon-Tyne, 26·2 in Liverpool, 28·3 in Hull, and 30·2 in Sunderland. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 992, against 1422 and 1307 in the two preceding weeks; 379 resulted from diarrhœa, 81 from scarlet fever, 69 from whooping-cough, 55 from "fever" (principally enteric), 54 from measles, 27 from diphtheria, and 12 from small-pox. The lowest death-rates from these diseases last week occurred in Oldham and Wolverhampton, and the highest in Preston and Hull. The death-rate from diarrhœa showed a generally marked decline last week; although it was again excessive in Hull and Preston. Scarlet fever caused the highest death-rates in Leeds and Nottingham; whooping-

cough in Huddersfield and Blackburn; measles in Hull and Sunderland; and "fever" in Portsmouth and Hull. The 27 deaths from diphtheria in the twenty-eight towns included 17 in London, and 2 both in Salford and Sunderland. Small-pox caused 9 deaths in London, 2 in Newcastle-upon-Tyne, and one in Leeds. The number of small-pox patients in the metropolitan asylum hospitals, which had been 114 and 101 on the two preceding Saturdays, further declined to 91 at the end of last week; only 9 new cases of small-pox were admitted to these hospitals during last week, against 32 and 20 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 199 and 202 in the two preceding weeks, declined to 178, which were, however, 17 above the corrected weekly average. The causes of 79, or 2·5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Norwich, Leicester, and in six smaller towns; whereas the proportions of uncertified deaths were largest in Leeds, Halifax, Oldham, Salford, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight Scotch towns, which had been equal to 20·0 and 21·1 per 1000 in the two preceding weeks, declined again to 20·1 in the week ending the 9th inst., and exceeded by but 0·2 the mean rate last week in the twenty-eight large English towns. The deaths referred to the principal zymotic diseases in these Scotch towns were 121 last week, and exceeded the number in the previous week by 2; they included 56 from diarrhœa, 29 from whooping-cough, 14 from diphtheria, 11 from scarlet fever, 6 from "fever," 5 from measles, and not one from small-pox. The death-rate from these principal zymotic diseases averaged 5·2 per 1000, and exceeded by 1·0 the mean rate from the same diseases in the large English towns. The highest death-rate from these diseases occurred in Greenock, Glasgow, and Perth. The 56 deaths attributed to diarrhœa showed a further decline from recent weekly numbers, but included 28 in Glasgow, 11 in Dundee, and 5 both in Edinburgh and Greenock. The fatal cases of whooping-cough, on the other hand, which had been 11 and 22 in the two previous weeks, further rose to 29 last week, of which 22 occurred in Glasgow and 3 in Perth. The 14 deaths from diphtheria were within one of those in the previous week, 8 being returned in Glasgow and 3 in Edinburgh. Seven of the 11 fatal cases of scarlet fever occurred in Glasgow, and 4 of the 5 of measles in Dundee. The 6 deaths referred to "fever" showed a further decline from recent weekly numbers—they included 3 in Perth and 2 in Glasgow. The deaths referred to acute diseases of the lungs in the eight towns, which had been 60 and 80 in the two previous weeks, declined again to 61 last week, and were 28 fewer than those attributed to the same diseases in the corresponding week of last year.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had risen from 20·1 to 27·3 in the three preceding weeks, further increased to 27·6 in the week ending the 9th inst. During the first ten weeks of the current quarter the death-rate in the city averaged 22·5 per 1000, against 18·6 in London and 17·7 in Edinburgh. The 184 deaths in Dublin last week showed a further slight increase upon the numbers returned in the three preceding weeks; they included 17 which were referred to diarrhœa, 8 to "fever," 1 to measles, 1 to scarlet fever, 1 to diphtheria, and not one either to small-pox or whooping-cough. Thus 28 deaths resulted from these principal zymotic diseases, against 27 and 28 in the two previous weeks; these were equal to an annual rate of 4·2 per 1000, while the rate from the same diseases was 3·1 in London and 2·0 in Edinburgh. The deaths referred to diarrhœa, which had steadily increased from 5 to 19 in the six preceding weeks, were 17 last week. The fatal cases of "fever" (enteric, typhus, or simple), which had been 6 and 3 in the two previous weeks, rose to 8 last week, and exceeded the number returned in any week since March last. The death-rate from fever last week in Dublin was equal to 1·20 per 1000, and was more than seven times as great as that which prevailed in London during the same period. The deaths both of infants and elderly persons almost corresponded with those returned in the preceding week. The causes of 22, or nearly 12 per cent., of the deaths registered during the week were uncertified.

MORTALITY STATISTICS IN THE WEST INDIES.

It is much to be regretted that the vital statistics relating to our West Indian Colonies are not issued collectively and upon some uniform basis. Under present arrangements these statistics are published at various dates and in every variety of form for the numerous islands and provinces which comprise our colonies in the West Indies. So far as may be judged from the desultory, and in many cases most imperfect, statistics which from time to time come before us, it cannot be doubted that the health of these colonies, measured by their death-rate, has materially improved in recent years. A report has been recently issued by the Registrar-General of Grenada which affords the means for estimating the health condition of this island during last year. The island of Grenada had at the census in April, 1881, an enumerated population of 42 403 persons, which had, according to the Registrar-General's estimate, increased to 42,788 by the end of the year; this estimate gives an average density of 321·7 persons per square mile. The birth-rate, calculated on the population at the beginning of the year, instead of the middle of the year, which would have been more correct, appears to have been as high as 43·5 per 1000. This rate is inclusive of still-births, which are registered both as births and deaths. Especial attention is called to the fact that more than half the births (52·3 per cent.) are illegitimate. This large proportion is attributed partly to the overcrowding in houses inhabited by the lower classes of the colony, and partly to "the shameless indecency with which many parents of the peasant class permit their children to go without clothing" in defiance of the law. The death-rate was equal to 27·7 per 1000, and all but corresponded with the mean rate in the preceding ten years. The return as to the causes of death is of the most meagre description, owing in great measure to the difficulty of obtaining satisfactory information on this point. Indeed, in nearly ten per cent. of the recorded deaths the cause was not stated. Zymotic diseases are stated to have caused 221, or 15 per cent., of the deaths; but beyond a vague reference to the fatal prevalence of whooping-cough, and a quotation from some remarks furnished by the colonial surgeon, who says that "the endemic fever of the tropics" prevailed, but not to a great extent, during the latter half of the year, no details of this zymotic fatality are given. With reference to infant mortality, it is stated that the deaths of infants under one year of age was equal to 188 per 1000 of the registered births. Excessive as is this rate of infant mortality, it is not higher than might be expected, bearing in mind the remarkably high proportion of illegitimacy. It is urged that if the production of medical certificates were made compulsory in the case of deaths of children, the rate of infant mortality would be much reduced. There are obvious difficulties in the way of making the production of such a certificate compulsory, but formal inquiry into the cause of all uncertified deaths would probably have an important effect in the desired direction. We have, however, yet to obtain this important reform at home before we can fairly urge its adoption in Grenada.

THE SERVICES.

A reinforcement of the Army Hospital Corps, consisting of sixty non-commissioned officers and men, embarked for Egypt in the P. and O. steamer *Nizam* on the 13th inst., Surgeon-Major W. C. Boyd being in medical charge of the troops proceeding thither.

Deputy Surgeon-General Fox has been ordered to proceed from Chatham to Ismailia to superintend the hospital service at the base of operations.

Surgeon-Major W. T. Martin is under orders to embark for Egypt at an early date.

The staff of lady nurses with the expedition is to be increased by five additional sisters.

Brigade-Surgeon G. S. Ogg, Madras Medical Service, has been appointed to officiate as Deputy Surgeon-General during the absence with the expeditionary force in Egypt of Surgeon-General Colvin Smith, M.D.

Surgeon MacGeogh embarked on board the s.s. *Palmyra* on the 13th inst. in charge of drafts ordered to Cyprus.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General John Phillips Cunningham, M.D., has been granted retired pay, with the honorary rank of Surgeon-General; Brigade Surgeon Adam Graham Young, from half-pay, to be Brigade Surgeon; Surgeon-Major Alfred Frederick Strafford Clarke, M.D., has been granted retired pay, with the honorary rank of Brigade Surgeon.

RIFLE VOLUNTEERS.—1st Huntingdonshire: Surgeon and Hon. Surgeon-Major Dennis Adams and Hon. Assistant-Surgeon George Robinson resign their commissions.—1st Devonshire: George Chapman Steele-Perkins, gent., M.B., to be Acting-Surgeon.—1st Newcastle-on-Tyne and Durham: William Mearns, gent., M.A., M.D., to be Acting-Surgeon.—1st Dorsetshire: Surgeon Henry Tizard, M.D., the resignation of whose commission was notified in the *London Gazette* of July 4th, is permitted to retain his rank, and to wear the uniform of the corps on his retirement.—2nd Gloucestershire: Surgeon Edward Waddy resigns his commission.—3rd Monmouthshire: Samuel Butler Mason, gent., to be Acting-Surgeon.—1st Inverness-shire (Inverness Highland): Acting-Surgeon John Simpson, M.D., resigns his appointment.—1st Kent: Acting-Surgeon Adam Young to be Surgeon.—2nd Lanarkshire: Surgeon James Loudon, M.D., is granted the honorary rank of Surgeon-Major.

ADMIRALTY.—The following appointments are announced: Staff-Surgeon Thomas Conroy to the *Dasher*; L. Ffrench-Mullen to the *Garnet*, commissioned; Staff-Surgeon James William Fisher, M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of the 2nd inst.

MEETING OF THE FOURTH INTERNATIONAL CONGRESS OF HYGIENE AT GENEVA.

IT must at once be recognised that the Congress has been a great success. It numbered more than 400 members, and no less than twenty-four different nationalities were represented. There were members who came expressly to assist at the Congress from Algeria, Austria, Belgium, Brazil, Bulgaria, Basutoland, Denmark, England, Germany, Greece, Holland, Hungary, Italy, Mexico, Ontario (Canada), Portugal, Poland, Roumania, Servia, Switzerland, Spain, Sweden, Turkey, and the United States of America. Many of the principal Governments—France, Germany, Russia, Austria, Spain, Italy, &c.—sent official delegates; while many leading municipalities—Paris, Berlin, Frankfort, Seville, Madrid, Turin, La Haye, &c.—also appointed special representatives. The Board of Health of Ontario (Canada) was represented by Dr. C. W. Covernton, but not a single English town or administration sent a representative. We noticed that two gentlemen from the Local Government Board were present; but they came in their private, not their public, capacity. Under such circumstances it is not surprising that many complaints were uttered at the lack of friendly feeling on the part of the English nation. As the leaders in sanitary reform, we ought to take an active part in assisting this great effort on the part of European nations to spread and equalise sanitary reform. With such speakers as M. Pasteur and M. Paul Bert, it is impossible to say that even the wisest among us have nothing to learn; while, on the other hand, we have everything to gain by coming to an international understanding on sanitary matters. Thus Professor Brouardel, after a most able paper read in the third section, carried a resolution, subsequently confirmed by the general assembly, that at the next International Sanitary Congress the delegates from each nation should bring a summary of the laws affecting the adulteration of provisions, so that adulterated food, condemned in one country, should not be exported and sold with impunity in another. Our recent experiences with respect to preserved peas imported from France, and coloured with copper, points to the necessity of such international understanding. Dr. Brouardel insisted that falsifications were now carried out with the aid of enormous capital and great chemical knowledge. The employment of salicylic acid to preserve beer, wine, milk, fish, vegetables, &c., was especially dangerous. It might be argued that the quantity used was insignificant; ten centigrammes in a litre were supposed to suffice to prevent wine from turning sour; but he had often found an entire gramme in the litre. The fact was that the same substance was manipulated by different people. Perhaps the wine-grower himself, feeling a little anxious about his wine, would add a little salicylic acid; then the wholesale merchant would, in his turn, interfere; and finally the retailer came with a third dose, each probably imagining that he alone had resorted to this dangerous expedient. Thus, when the bottle came to the unfortunate consumer it had been thrice dosed, and perhaps thrice overdosed. The effect of this form of slow poisoning was most difficult to trace to its origin, unless some accident revealed the cause. Dr. Brouardel suggested, however, that by the analysis of urine the unconscious absorption of salicylic acid could in most cases be detected. The worst feature in the use of this acid for the preservation of food arose from the fact that there was no uniform rule as to the quantity which could be taken with impunity. A healthy child might take even five grammes in one day without any very serious consequence; whereas an adult invalid, especially if suffering from any renal complaint, would require eight days to eliminate such a dose. This was but one illustration of the dangers attending the unscrupulous use of scientific means to promote the interests of certain traders; and it was of little use checking the evil in one country if the suspicious articles could be sold with impunity on the other side of the frontier.

This is but one example of the style of discussions that prevailed, and of the practical advantages to be derived by a nation such as England, when represented at congresses of this description. The discussions were divided into five separate sections, and the work and pleasures of the Congress lasted every day from nine in the morning till midnight, with barely time allowed for meals. We cannot now give a summary of the debates. We may, however, express in the name of the English members who were present our high appreciation of the cordial and most hospitable reception accorded by the organisers of the Congress and the Swiss Government. It was scarcely possible to believe that a nation so restricted in its area, so limited in its population, could have given its foreign guests so magnificent a welcome. The first night there were an official reception and concert in the vast saloons of the new theatre—one of the model theatres of Europe so far as ventilation is concerned. On Tuesday evening, Professor A. de Condolle, son of the renowned botanist, and himself a man of high scientific attainments, received the members of the Congress at his mansion, near Geneva. The vast gardens and their botanical treasures were brilliantly illuminated, while within the members of the Congress joined with the *élite* of Geneva society in the enjoyment of a bountiful supper. The following evening there was a similar reception at the hydrotherapic establishment of Champel-sur-Arve on the outskirts of Geneva. But of all days Thursday was the most enjoyable. The Swiss Government had provided the finest steamer of the lake, the *Mont Blanc*, and three hundred and fifty members of the Congress embarked at nine in the morning, following the southern coasts of the lake till we reached Evian-les-Bains. Here a sumptuous lunch was provided by the directors of the establishment; and, after a few speeches and a stroll, the Congress once more went on board. But even at this moment business could not be altogether forgotten. In spite of the loud tones of the band which accompanied the expedition, and the general desire of the company to enjoy the unrivalled surrounding scenery, the Italian delegates insisted on holding a meeting in the principal cabin to discuss cremation. Fortunately the speeches were short. The effects of the lunch and the joys of the holiday were scarcely in harmony with this gloomy subject. After visiting the extreme end of the lake, where the Rhone brings the mud of the mountains into the clear waters, and then stopping a moment to contemplate the historical castle of Chillon, we landed at Montreux, saluted by peals of artillery. At the Kursaal the theatre was converted into a banqueting-hall, the stage being occupied by local bands and glee societies, who played and sang alternately during the dinner and between the speeches, in which the members of the Swiss Government, the Federal Council, and the local administration took a prominent part. When the banquet was over it was already dark, and the members of the Congress were agreeably surprised to find the whole line of the coast illuminated in their honour. The steamer also was gaily bedecked with garlands of lamps of many colours, while on the still waters smaller

craft flitted here and there, burning Bengal fire or carrying numerous lamps that reflected their colours on the transparent lake. The Congress once on board, the steamer put off a little distance from the pier, and then commenced a display of fireworks, starting simultaneously from the gardens of the hotels that line the shore, and from points high up in the mountains. Against the dark background of the black mountains, the Bengal fire enabled us clearly to discern the elegant hotels and villas poised some three thousand feet above us at Les Avants and at Glion. The church steeple of Montreux was brightly lit. Vevey and the surrounding villages joined in the festivities. For some two or three miles along the coast it was one blaze of light, and rocket after rocket shot up towards the sky; while the roar of the cannon, the stirring strains of the British national anthem (played by a powerful brass band), the cheers from the ship and the shouts from the shore, all helped to conclude a reception unsurpassed for its cordiality, and which will for ever remain deeply impressed in the memory of the guests. Nothing could have more conclusively proved the public spirit of the Swiss population, the interest they have taken in the work of the Congress, and the high honour they wished to confer on their distinguished visitors. Another evening reception, concert and supper, on the Friday, at the mansion of Mde. Eynard, and a farewell banquet on Saturday evening, concluded the festivities of the Congress; and certainly, whatever services the members may have rendered by their work during the week, they have been amply rewarded by the cordiality and unbroken harmony of the reception accorded to them. If sanitary science can always be propagated under such auspicious circumstances, it will certainly become the most popular of all sciences.

PROSECUTION FOR FORGERY OF PRACTITIONER'S NAME TO CERTIFICATE OF DEATH.

AT the Thames Police Court, on September 2nd, before Mr. Lushington, William Henry Viner, of 123, St. George's-street, East, appeared to answer a summons issued at the instance of the Medical Alliance Association, charging him with the wilful forgery on the 21st August ult., of a certificate concerning the death of a child named Annie Niendorff. Mr. C. J. C. Pridham, solicitor to the Association, appeared for the prosecution; and Mr. Besley, barrister, for the defendant.

Mr. Besley took a technical objection to the summons on the ground that no one but the Superintendent Registrar of the District had the power to issue the same under the Act; but after a lengthy argument from the learned gentlemen engaged, it was over-ruled by the magistrate.

The facts of the case as proved disclosed a very serious offence, and Mr. Pridham, in opening the case, stated it was the gravest charge of the kind in which he had ever been instructed to prosecute. It appeared, from the evidence of the mother, that the child Niendorff fell ill about the 17th or 18th August, and was taken by her to a medical hall and dispensary at 123, St. George's-street, East, kept by the defendant in the name of a registered medical practitioner named Berdoe. The child was seen there on two occasions by the defendant, who represented himself to the mother as being properly qualified, and whom the mother believed to be Dr. Berdoe, as that name appeared over the door. On the 21st August the child died, and the mother applied at the dispensary for a certificate of its death. The defendant thereupon wrote and signed in the mother's presence a certificate, in which he stated that he had attended the child Niendorff, certifying the cause of death as pneumonia and convulsions, and signed the name of Edward Berdoe, M.R.C.S., L.S.A., 123, St. George's-street, East, and gave the same to the child's mother.

Formal evidence was given by the district registrar of the receipt of the certificate from the mother, and of his having entered the death in the register as certified by Dr. Berdoe.

Dr. Berdoe was then examined, and stated that he had never seen or attended the child Niendorff, or certified the cause of death. The signature to the certificate was a forgery.

In cross-examination the witness stated he had sold the business of a chemist and druggist, at one time carried on by him in connexion with his medical practice at 123, St. George's-street, East, to the defendant in October, 1879. Since that time his connexion with the place and the defendant had entirely ceased. He had desired the defendant on several occasions to remove his name from the facia, which he promised to do, and was unaware of the fact that it was still up there until so informed by the solicitor for the prosecution. He had never given the defendant on any single occasion any authority to act for him or to use his name. The defendant had made overtures to him to attend there and see patients, which he declined.

Mr. Lushington, in giving judgment, said the defendant had committed an offence of a most serious kind. It had been suggested by the defendant's counsel that he had no power to deal with the summons. He felt some difficulty in doing so, not on the technical ground put forward by Mr. Besley, but because he was in some doubt whether he ought not to commit the defendant for trial. However, as he had not been requested to do so by the prosecution, he should impose the severest penalty he had power to inflict. He ordered the defendant to pay a fine of £10, and £5 5s. costs, or to be imprisoned for three months in default.

Correspondence.

"Audi alteram partem."

THE ABSENCE OF SCURVY IN THE "EIRA" ARCTIC EXPEDITION.

To the Editor of THE LANCET.

SIR,—I cannot help thinking that the suggestions which have been made as to the probable explanation of the absence of scurvy in the *Eira* expedition are founded upon a misapprehension of the circumstances in which the crew were placed. If Mr. Neale's most interesting narrative in THE LANCET of August 26th be carefully read, it will be seen that the crew were abundantly supplied with vegetables to eat along with their ample allowance of meat. They averaged half a pound of vegetables to each man per diem. I suppose there are few of us who eat more than this. The experience of the *Eira* expedition, therefore, so far from being in the least degree contradictory of the generally received opinion as to the cause of scurvy, lends the best possible support to its correctness. Had scurvy occurred in the circumstances described, the fact would indeed have been very remarkable.

Mr. Neale has been good enough, at my request, to record (THE LANCET, Sept. 2nd) certain particulars respecting the mode of preservation of the vegetables which were saved, and the state in which they were consumed. These details appear to me to be of great importance, and will need to be carefully noted in the preparations for any future expeditions.

I am, Sir, yours faithfully,

Grosvenor-street, W., Sept. 1882. THOMAS BUZZARD.

AUTUMNAL DIARRHŒA.

To the Editor of THE LANCET.

SIR,—Allow me to call the attention of medical men to the prevalence, in autumn, of sickness and diarrhœa, which is put down to fruit. Autumn is the time for ripe fruit, but because diarrhœa is also prevalent at the same time we must not blame fruit for it. If we carefully examine each case which comes before us, we shall find that fruit plays a very small part in it. The real cause is the heat of the weather and the animal food taken. I will now describe an ordinary case and its usual cause. The patient goes to bed all right and in his usual health; he is awoke about two or three hours after retiring by a sharp griping pain across the abdomen, he also feels blown up, and keeps eructating mouthfuls of flatulence and acid fluid. Purging soon sets in and offensive liquid stools are passed. Vomiting next occurs of an acid acrid fluid. There may be cold shivers and hot flushes, which are followed by a feeling of great prostration. This continues during the night and best part of next day. Food, especially if warm, only makes matters worse.

We are called in, and find the patient has a quickened pulse, foul tongue, yellow conjunctivæ, a dejected look, and he complains of feeling very low. Cross-questioning nearly always brings out the fact that at supper-time he had a good meal, consisting of fish, flesh, or fowl. The most offending meat is pigs' flesh in some form, chiefly as pork; then comes veal, and lastly plain beef or mutton. The fish most commonly giving rise to this sickness are salmon, mackerel, lobster, and crabs. A few cases can be traced to high cheese or to eggs. Cucumber may help, especially if dressed in the usual way with salt and pepper. But never have I seen a case where a purely vegetarian supper has been taken. The treatment is very simple: allow spoon food every four or five hours, it must not be hot, but lukewarm; enjoin rest, and give a mild sedative of some kind. I am, Sir, yours truly,

T. R. ALLINSON, L.R.C.P. Ed.

Kingsland-road, E., Sept. 12th, 1882.

VOLUNTEER AMBULANCE SERVICE.

To the Editor of THE LANCET.

SIR,—As I have had numerous inquiries as to the formation and equipment of volunteer ambulance detachments, I shall feel obliged by your insertion of the following particulars in your journal, for the information of those who have not already formed such detachments, and who are desirous of doing so.

The senior regimental surgeon, before instructing his class, should first make himself efficient by passing the Examination for Volunteer Medical Officers. The books required for this examination are: (1) "Parkes' Hygiene," by Professor De Chaumont; (2) "The Surgeon's Pocket-book," by Surgeon-Major Porter; (3) "Gunshot Injuries," by Professor Longmore; (4) "Manual of Instructions for Army Hospital Corps;" (5) "Manual of Exercise for Stretcher-bearers and Bearer Company;" (6) "Army Medical Regulations."

As soon as the medical officer feels himself prepared for the examination he must apply, through his adjutant, to the commanding officer of the regiment to be examined. In due course he will receive an intimation from the principal medical officer of his head centre to appear for examination. The examination is conducted by three officers of the Army Medical Department, is *viva voce*, thoroughly practical, and embraces the prevention and treatment of diseases peculiar to soldiers in camp and on field service. The following are the most important points:—(1) Sanitation of camp and precautions against disease; (2) sanitation for troops on the line of march; (3) general treatment of diseases common in camp and on field service; (4) first assistance to wounded on field of battle; (5) their removal and transport to field hospitals.

On passing this examination the medical officer will receive a certificate of proficiency in the following words:—"We certify that ——, of the —— (who is registered under the Medical Act of 1858 as qualified to practise medicine and surgery in Great Britain and Ireland), is well acquainted with the nature and intended application of the various articles composing the equipment of army hospitals in the field, and with the authorised means for the transport of sick and wounded soldiers, and the proper modes of employing them. We also certify that he has a competent knowledge of the treatment of the wounds and injuries to which troops are liable in the field, particularly with regard to the special circumstances of campaigning; and that he is acquainted with the duties to be performed by army medical officers in camps and bivouacs, and during marches, as detailed in the Regulations for the Army Medical Department, Revised Army Regulations, vol. vi. Signatures of Board of Examining Officers——, Station——, Date——."

I may here mention that medical officers by thus obtaining this certificate of proficiency will earn for their respective corps the special capitation allowance of £2 10s.

Assuming, then, that the medical officer has obtained his certificate of proficiency, and wishes to form bearer detachments, his first duty, of course, is to obtain the permission of his commanding officer, then to select two men from each company in his battalion to be trained as stretcher-bearers. Thirteen lectures must be given of not less than an hour and a half's duration each, at which each bearer must be present not less than eleven times. The lectures are given in accordance with the instructions issued by the Volunteer Ambulance Department, a synopsis of which can be obtained by applying to Lieut. Maclure, Volunteer Ambulance Department, Army Medical Department, 6, Whitehall-yard, London, S.W., and from whom also can be obtained the stretchers and diagrams required. The field companies, haversack, and water-bottles are obtained from Messrs. Savory and Moore, New Bond-street, London. As soon as the class has been duly trained the surgeon must apply to the principal medical officer of the district, who will cause the bearers to be examined, and if found proficient, will each receive a certificate on Army Form, E. 596. Two volunteers from each company who have so qualified will be selected by the commanding officer of the corps, on the recommendation of the medical officer, to be the stretcher bearers of the corps and to wear the Geneva Badge on their right arm. These badges can be obtained from Lieutenant Maclure also. I believe, as a rule, commanding officers are glad to do all in their power to forward this movement, and I can only speak of my own good Colonel Sir William Worsley, Bt., and his able adjutant, Major Hedley, as patterns in this respect.

I cannot conclude these few remarks without gratefully acknowledging the great assistance and information I received from Surgeon W. H. Platt, Treasurer, and Lieutenant Maclure, Secretary of the Volunteer Ambulance Department, when I was commencing this work myself.

I am, Sir, yours truly,

JOHN WM. TAYLOR, M.D., D.Sc.,
Surgeon 2nd Battalion North York Rifle Volunteers.

Scarborough, August 28th, 1882.

A CASE FOR HELP.

To the Editor of THE LANCET.

SIR,—May we ask your readers to consider an appeal which we have to make on behalf of a medical man, late of Buntingford, Mr. Charles Gaffney, who has to be maintained in an asylum by two sisters, who have much difficulty in supporting themselves by a lodging-house in the Fulham-road. If some means of helping them is not quickly forthcoming, no alternative will remain but that of making him a pauper lunatic. Their case is the harder now as one of the sisters is ill with bronchitis, and their principal apartments are unoccupied. The merit of the case is further illustrated by the fact that two kind grants have been made by the British Medical Benevolent Fund—one of £30 in 1881, and one of £18 in 1882. The mental disease which has disabled Mr. Gaffney has existed for nearly fifteen years. During part of this time he has been supported out of some means of his own, which have long been entirely exhausted, and he is now dependent on two sisters, who are themselves very hardly pressed and confronted with the workhouse. A few kindly subscriptions at this adverse moment might help two good sisters to keep an insane brother, and brighten what seems a very dark look-out.

We are, Sir, your obedient servants,

A. P. STEWART, M.D.
J. G. GLOVER, M.D.

Subscriptions already received:—

THE LANCET	£2	2	0
Dr. Stewart	2	2	0
Dr. Glover	2	2	0

HOMES FOR INEBRIATES.

To the Editor of THE LANCET.

SIR,—In his second annual report the able Inspector of Inebriate Retreats strongly urges the need for the opening of the proposed Dalrymple Home for Inebriates. Though indefatigable in their efforts, the committee have received very limited pecuniary support. They, however, hope to be able to commence operations before the end of this year. The triumphant progress of temperance missions is daily recorded by the Press, and it is to be hoped that the unselfishness and devotion which ought to be the motive power of such a crusade will be attested by liberal financial support to the projected Dalrymple Home as an attempt at

the reformation and cure of the many habitual drunkards whose whole system has become so diseased by alcohol that absolute seclusion from temptation is essential to restore their shattered nerves and their utterly broken down will power. Among the office bearers of the proposed Home are the Archbishop of Canterbury, the Duke of Westminster, Lord Shaftesbury, Sir Thos. Watson, Sir Henry Thompson, Dr. Andrew Clark, and Dr. B. W. Richardson. £3000 is still needed. Donations and also annual subscriptions will be thankfully received by the chairman, Canon Duckworth, Dr. Alfred Carpenter, J.P., Croydon.

I am, Sir, your obedient servant,

NORMAN KERR, M.D.,
Hon. Sec., Dairymple Home.

Grove-road, Regent's-park, N.W., September 9th, 1882.

CLINICAL THERMOMETRY.

To the Editor of THE LANCET.

SIR,—I wish to call your attention to a possible source of error in clinical thermometry. I have one of Maw's seven-inch hospital thermometers, and I accidentally discovered that by gentle compression of the mercurial bulb I was enabled to make the index rise some three or more degrees; such pressure the bulb might easily be subject to in the axillary space, especially if the arm be pressed close to the side.

I am, Sir, yours truly,

Brighton, Sept. 5th, 1882. J. M. E. SCATLIFF, M.D.

NERVE-VIBRATION: A CAUTION.

To the Editor of THE LANCET.

SIR,—Will you permit me as the originator of the method of "Nerve-vibration by *precise* percussion" in the treatment of certain forms of nervous disease and disturbance to warn the profession against the conversion of this method into a "cure" or "system"—of which we have already too many mischievous specimens—by placing my percuteurs in the hands of patients and their friends. As well, and more safely, might those gentlemen who are pursuing this course supply their clients with scalpels, galvanism, electricity in its various developments, and hypodermic injections, which have been reduced to the level of nostrums by this reckless procedure.

I must earnestly protest against the abuse of nerve-vibration by a like policy. My protest is made not less in the interests of the sufferers from diseases than in that of professional propriety. Nerve-vibration is a potent agency for good or evil, as it happens to be applied. It is exceedingly difficult of application, and requires to be employed with the greatest care and intelligence. A thorough knowledge of the anatomy and physiology of the nervous system is indispensable for its safe and successful use. If medical men have not the time or do not care to administer it themselves, they will do wisely to leave it alone.

Already I have seen harm ensue from its misuse, and I therefore feel bound to give this warning to medical men who having heard of cases which have been benefited are purchasing or borrowing instruments *for their patients to use!* Nothing but disappointment can result from this indiscretion.

I am, Sir, yours truly,

Welbeck-street, W., Sept. 1882. J. MORTIMER GRANVILLE.

GLASGOW.

(From our own Correspondent.)

MR. GEO. A. D. MACKAY read an interesting paper at the recent annual meeting of the Sanitary Association of Scotland, in which he reviewed the improvement which had been effected in the public health in Greenock since the local authority had obtained special Parliamentary powers. Before 1876 the general mortality of the town was higher than in any other town in Scotland; while the special mortality in certain of the closes and blocks of buildings was appalling—40 to 67 per 1000 of the population on an average of ten years. The removals to the hospital and fever-house were so numerous that they were equivalent to the whole population of the locality being sent there in the space of twenty-five years. The mean annual death-rate during the period 1875–75 was 31·24 per 1000; while in the five years 1876–80 it was 24 per 1000, and last year 22·14. Contrasting the mortalities of these periods, this improvement is equal to 621 lives saved. This change has taken place notwithstanding the many physical drawbacks from which Greenock suffers—a bad site, a proverbially rainy climate, irregular and narrow streets, extreme concentration of population, and a smoky atmosphere. The figures I have quoted are excellent, and show that the Greenock authorities have not fallen behind in the march of sanitary progress.

The position of surgeon to large industrial establishments is becoming anything but an enviable one in this part of the country. This is in part due to the assertion by the workmen, in many quarters, of their right to elect their medical officer themselves, in consideration of the fact that he is paid by sums retained periodically from their wages; power is thus transferred from the masters to the men, a change which does not seem to have a very elevating influence on the tactics adopted by contending medical candidates in many instances. For example, we have at present a contest going on in Glasgow for the surgeonship to certain iron-works, a place of some pecuniary value, for which about forty applicants are striving, some of them after a fashion hitherto supposed to belong exclusively to parliamentary or municipal elections; thus, the works are placarded with bills advising the men to "Vote for ——!"; and hand-bills are circulated asking "Why vote for ——? Because he is a *gentleman;* because you all know him" and so on. It is to be hoped that it is the injudicious friends of the candidates, and not the candidates themselves, who are at the bottom of all this.

Sounds of preparation for the coming winter are heard in all our numerous local medical schools. At the University there is no change of any importance to chronicle. At the Royal Infirmary the managers have shown by their laudable energy and liberality that they have the good of their medical school at heart, the new block of buildings which has been erected, to be devoted entirely to the purposes of the school, providing almost a superabundance of accommodation for the lecturer. Such enterprise indicates faith in their future. The staff of the Western Medical School has been increased by the appointment of Mr. W. Limont as lecturer on Physiology. At Anderson's College things remain pretty much as they were last year. The calendar just issued by this college is, in a certain sense, very instructive reading. The interest lies, as usual, in the statistics. On looking at the statement of the number of students in attendance last year, winter and summer, it is found that the grand total amounts to 2405. These figures are startling, and to the uninitiated give the impression of a very extensive concern. Even after deducting nearly 900, the number attending the popular evening classes, and about 1100, the number said to attend the non-medical classes, we have a medical school with an alleged strength of over 400, a statement which we in Glasgow know to be utter nonsense. And the manner in which this result is achieved is delightfully simple; it is the old trick (for it is nothing else) so familiar to country theatrical managers who have to make a handful of "supers" do duty for the British Army by effecting numerous entries and exits; each student is reckoned in once for every class he attends, both summer and winter. A student, therefore, who takes, say four classes in winter and two in summer, finds that he plays rather an important part in these statistics. This ready method of "magnifying one's office" is really a credit to the author.

There was another unfortunate death from chloroform in the Royal Infirmary the other day. The operation for which it was given was, as is most commonly the case, a very trifling one, the removal of some smashed toes. Doubtless a report of the case will be forthcoming.

The salary of Dr. James B. Russell, medical officer for the city, has been raised from £700 to £850 per annum, and is thus brought more into accord with the many and important duties of the office and the services Dr. Russell has already rendered to the city.

It is freely reported both here and in Aberdeen that Dr. William M'Ewen of this city is standing as a candidate for the vacant chair of surgery in Aberdeen University. I believe I am right, however, in saying that Dr. M'Ewen has given up all intention of joining in the contest. Possibly the loss of hospital practice which such an appointment

would, in the first instance at any rate, involve, may prevent such outsiders as wish to practise as pure surgeons from applying for the vacant post.

SCOTTISH NOTES.

(From our own Correspondent.)

SINCE I last wrote, the vacancy in the surgery chair at Aberdeen has given rise to much speculation in the North of Scotland, and quite a crop of candidates is spoken of. It is not too much to say that some of the local gentlemen who have come forward, or allowed their names to be mentioned as candidates, have no claim whatever to such an honourable position, their surgical fame being quite imaginary. When it is mentioned that Dr. Ogilvie Will is not in the field to oppose Dr. Alex. Ogston, it will be understood that the latter gentleman has the almost undivided support of the local profession, and I know that Dr. Ogston has the enthusiastic support of almost the whole professorial staff, though the minority, from its activity and position, is by no means powerless. It is gratifying to hear that Dr. Ogston has returned from his holiday much improved in health, and feeling quite fit for the duties of the chair. If his fitness as a teacher equals the testimony offered by his students at the infirmary and others, his scientific labours should render it difficult for the Home Secretary to overlook his claims, as compared with the other candidates now in the field. So far, the only declared candidate out of Aberdeen is Dr. Cantlie, Demonstrator of Anatomy and assistant-surgeon at Charing-cross, and if the partiality shown by the Charing-cross authorities for Aberdeen graduates can be reciprocated, an opportunity is now offered. One reason for the paucity of strong candidates from a distance is the fact that Dr. Pirrie's place has been already filled at the infirmary, and the directors do not guarantee a place on the staff for the professor if he is not already there. This is peculiarly unfortunate in the interest of the university, as it is not unlikely that the distinguished surgeon of whom I have already written, and possibly other suitable men, may decline to compete for this particular reason. The arrangement may not have been preconcerted, but it has a very suspicious aspect.

It has been arranged for Professor Young of the Glasgow University, to deliver the course of lectures at Aberdeen during the ensuing session, under the Thomson bequest. The course, addressed chiefly to students of divinity at the Free Church College, is also open to the public, and deals with some special branch of natural science. Hitherto the lectures have been successful, and are now looked forward to with considerable interest.

The Asylum Board at Montrose have commissioned a local well-known artist to paint Dr. Howden's portrait, as a memento of the late centenary celebration, and as an evidence of the esteem in which he is held by his directors.

From the report of the Tweed Commissioners, it appears that the fungoid disease has, during the past year, affected an enormous number of salmon in that river. As compared with what was in 1880 considered an excessive mortality, the number of dead fish removed during the past year is grievously disappointing. The 2907 in 1881 seemed favourable after 5222 had been extracted in 1880, but this year the total is 14,627. The proportion of spawn and unspawned fish has varied largely during each year. The amount of river pollution from the various works is still undiminished, and in one case a prosecution has been instituted against the offending proprietor. As the disease has now spread to the Tay and other salmon streams, its prevention has become a serious question for the Fishing Board.

A boy about four years of age is said to have died at Stirling a few days ago from having eaten, while at play, the fruit of the deadly nightshade, atropa belladonna. Vomiting and delirium were present, and the boy was removed to the infirmary, where he died at the end of about twenty hours.

The highly fatal epidemic of scarlet fever at Cupar is now lessening in intensity, and the cases are rapidly decreasing in number. I was misinformed as to the presence of typhoid fever, and on direct inquiry learn that since the introduction of a system of water-supply, a few years ago, this disease has been seldom present, notwithstanding the insanitary state of many parts of the town, and notably that in which the present epidemic of scarlet fever has most located itself. Dr. Whitelaw's action and intelligent interference have been quite exemplary.

IRELAND.

(From our own Correspondent.)

THE examinations in the Faculty of Medicine of the Royal University of Ireland commenced last Monday in the Exhibition Palace, Dublin, the subjects being Anatomy and Physiology on the first day.

Surgeon-Major George Shaw, who was killed on the 28th ult. at Kassassin Lock, Egypt, was the second son of the late Mr. Christopher Shaw, a Dublin surgeon. The deceased, who was unmarried, was only thirty-five years of age; and his loss is much regretted by a very wide circle of friends both at home and abroad, to whom he was endeared by many deserving qualities.

By the lamented death of Professor Leith Adams, F.R.S., a vacancy has taken place in the Chair of Natural History and Botany in the Queen's College, Cork. Applications for the office will be received up to the 20th inst., the emoluments of which are partly obtained from the fees of students attending the classes and an endowment fund of £292 yearly to the chair.

The First Professional Examination of the Royal College of Surgeons under the new scheme will be held at the College on October 23rd next and following days. All students who commenced their medical studies on or after October, 1880, can present themselves for this examination on producing evidence of having passed the Preliminary Examination, and of having been engaged in medical study for at least nine months subsequent to registration as medical students. The examination will include Physics (if not passed at the Preliminary Examination), the Elements of Chemistry, Botany, Anatomy (Human Osteology), and Practical Pharmacy. The fee for this examination will be ten guineas.

No examinations for the licences of the College of Physicians took place last month, and it is not expected that any will be held this month either, even should a special examination be applied for. The annual election for president, vice-president, and other office-bearers will be held on St. Luke's day, the 18th proximo.

An "unfortunate" named Smith was killed last week in Dublin by a soldier who knocked her down and then made a thrust at her face with a short stick. Deceased was admitted into hospital in a state of insensibility, from which she never rallied. A post-mortem examination showed that there was a punctured wound of the left eyelid which passed through the orbit and into the brain almost to the back of the head. A somewhat similar accident took place in Dublin some twenty years since, when a medical student named Myles was killed by the thrust of an umbrella, the point of which pierced the eyelid and penetrated the brain.

The Annual Report of the President of the Queen's College, Belfast, shows that the aggregate number of students in attendance in the several faculties during the past session was much greater than in previous ones. There were in Arts 177, Medicine 364, Law 23, and Engineering 11, or a total of 575, as against 515 in the session of 1880-81. Hitherto a knowledge of Greek was rigidly enforced in the Matriculation Examination, but now as it is desirable to admit matriculated students of the Royal University *ad eundem*, and as that University allows a modern language to be taken as an alternative for Greek, the College has been compelled to adopt the same course.

The Senate of the Royal University elected five professors of the College to Fellowships, and also nominated three of the medical professors to the important office of examiners in the University. These appointments are of advantage not alone to the College honoured, but further to the general interests of education. The deficiency of accommodation in the College buildings has been more severely felt during the past session than in previous years, owing in part to the great increase in the number of students, and in part to the urgent demand for practical instruction in chemistry, natural philosophy, physiology, and histology. The deficiency has

become so urgent, that unless new buildings and laboratories are immediately provided the progress of the College will be seriously checked and its efficiency endangered. During the present session a beautiful series of microscopical preparations, showing in an admirable manner the whole texture of many organs of the body, was presented by Dr. Thiersch of Leipzig to Dr. Redfern, Professor of Anatomy, who has placed them in the Anatomical Museum.

The death is reported of Dr. W. Nassau Irwin, J.P., of Tirkeenan, county Monaghan, aged seventy-six.

Joseph Byrne, M.D., has been placed on the commission of the peace for the county of Londonderry.

PARIS.

(From our Paris Correspondent.)

THAT there is an undercurrent in favour of the revival of bloodletting in the treatment of disease is evident from its having been so frequently referred to lately in the Continental and British Medical journals. The question had been raised at the last meeting of the British Medical Association, and it has been lately referred to in THE LANCET, and if I revert to it here it is to give your readers the benefit of the opinions of two eminent physicians of Paris. Marshall Hall, Sir Thomas Watson, and Hughes Bennett, on the English side of the Channel, and Professor Trousseau and others on this side, had by their writings and practice contributed in a great measure to the almost entire suppression of this remedial agent, and by a singular contradiction Professor Peter, who was one of Trousseau's most fervent disciples, and present editor of his clinical work, uses it most freely—that is, in the form of venesection, leeching, and cupping. He employs venesection on rather a large scale, particularly in cases of apoplexy and epilepsy, in which Professor Trousseau condemned it altogether. At his clinical meetings and in his lectures at the School of Medicine Professor Peter teaches that, with all deference to his former master, he has found by experience that bloodletting, if judiciously employed, is invaluable in some cases, and apoplexy is just one of those in which it would be found useful. As in the days before the publication of Professor Trousseau's clinical works, Professor Peter practises bloodletting at the moment of the attack, with the hope of cutting it short, and he does so at a later stage with the view of facilitating the re-absorption of the clot of blood formed at the seat of the lesion, and to moderate the congestion in its neighbourhood. On the strength of this theory, Professor Peter, at his Clinic, lately bled a patient who was upwards of sixty for an attack of apoplexy and hemiplegia of the left side, by which he declared, at a meeting of the Medical Society, that this bleeding had been the means of saving the patient from imminent death. He employs general depletion even in the convulsions following apoplexy, with great benefit to the patient, as he had noticed that, notwithstanding the presence of a large quantity of albumen in the urine, the convulsions and the albumen had entirely disappeared after a small bleeding from the arm. Professor Vulpian employs bloodletting in its various forms in all cases of inflammation, and he has found it invaluable in peritonitis, whether from puerperal or other causes. At the Clinique d'Accouchement, Professor Depaul scarcely employs anything else in puerperal convulsions. He bleeds the patients largely and repeatedly until the most urgent symptoms are relieved, and he has frequently stated at the Academy of Medicine and at other medical societies that the results of the practice that he has carried out for more than a quarter of a century can bear comparison with any other method of treatment adopted by other physicians in similar cases: in fact, the mortality among his patients has always been considerably less.

M. Dumas, the eminent chemist, has been trying some experiments with a concentrated solution of alum, the results of which he lately communicated to the Academy of Sciences. He proposes this substance as an extinguisher of fires, as it renders non-inflammable all substances with which it is placed in contact. He recommends its use for putting out fires in the streets, &c. One of the members present observed that in theory the idea was plausible enough, but that its execution would be simply impracticable, owing to the enormous quantities of alum that would be required to meet the demand. It was, however, suggested that several articles in theatres, private houses, shops, &c., might be rendered non-inflammable by having them saturated in a solution of alum, and thus reduce the risk of spreading fires to a minimum.

Those who have been to Paris will recollect the hand balloons started some few years ago by the *Louvre* as a means of advertisement. These, however, have proved somewhat dangerous to the public, several accidents having occurred by the bursting of the balloons. It has been found that they are frequently filled with impure gas, consisting principally of sulphuretted hydrogen, and even arsenic has been found in them. The existence of this danger has been pointed out to the police, and strict measures have been taken to see that the balloons are filled with pure gas.

NEW YORK.

(From our Correspondent.)

I HAVE noticed several interesting communications in THE LANCET on the subject of "Anæsthetics." Perhaps some notes of recent discussions on this subject in the United States may be welcome.

Dr. J. G. Johnson, in a recent paper before the Medico-Legal Society of New York, in introducing a paper on "Anæsthetics medico-legally considered," referred to the fact that mankind in all ages and in all climes have sought relief from pain. The Egyptians produced sleep by inhalation. Pliny describes a powdered mineral which was applied to wounds to destroy pain; and the power of the mandragora wine used by the ancients was said to be sufficiently potent to render the patient insensible to even the pain caused by amputations. Dr. Johnson gives credit to Morton of Boston, Mass., as the benefactor of mankind, who first made use of an anæsthetic in surgical operations. This was in 1846, just one year before Dr. Simpson discovered the anæsthetic power of chloroform at Edinburgh. He then mentioned Austie's exhaustive experiments, carrying chloroform narcosis even to death, when it was demonstrated that the ano-genital region was the last to give up its sensitiveness. This accounts for the fact that, next to deaths in the dentist's chair, the frequency of deaths during operations for piles and other operations of the rectum has been noticed. Certain portions of the skin and subcutaneous tissue also retain their sensibility with extraordinary tenacity, these being the matrix of the big toe-nail, the margin of the anus, and the whole of the skin of the organs of generation. Dr. Johnson then briefly stated that, with these facts demonstrated, the explanation of those grave charges made by females of respectability became easily enough understood. Those parts conveying sensation after all other parts have had the sensibility overpowered, the pressure of her clothing against the parts stimulating them as she is struggling under the influence of chloroform, and her being held, naturally convey to her the idea of something wrong, not knowing beforehand that the effect of chloroform will make her resist, and that she may forcibly be held down. As to the possibility of administering chloroform to persons while asleep, the question was raised at a recent trial for murder, when a woman, who was found by the side of her murdered husband, claimed that she had been "chloroformed" during her sleep. At the trial Dr. Quimby was called as a witness, and stated that he had tried the experiment, and had been successful in the case of one man and two boys, one of whom was ten and the other twelve years of age. It took about seven minutes to chloroform the man. Dr. Johnson states that the experiment has since been repeated, and that it has been found that with children it can be done by a skilful hand after a little practice, but with adults it is a matter of great difficulty, and unless the person using the chloroform is an expert it is an utter impossibility. The same rules for the use of nitrous oxide should be followed as employed with chloroform—namely, a reclining posture and loose dress. It also stimulates the sexual functions of both sexes; and the precaution should be observed to have a third party present. The following medico-legal points were made:—

1. Anæsthetics do stimulate the sexual functions. Charges made by females under the influence of anæsthetics should be received as the testimony of an insane person; it cannot be rejected, but the *corpus delicti aliunde* rule should be insisted on. 2. Death from administration of chloroform after a felonious assault, unless the wounding was an inevitably fatal one, reduces the crime from murder to a felonious assault. 3. The surgeon has no right to use chloroform to detect crime against the will of the criminal. 4. Gross violations of the well-known rules of administering anæsthetics, life being lost thereby, will subject the violator to a trial on a charge of manslaughter. 5. A surgeon allowing an untrained medical student to administer anæsthetics, and life being therefore lost, will subject the surgeon himself to a suit for damages. 6. The physician who administers an anæsthetic should attend to that part of the work and nothing else; he should have carefully examined the heart and lungs beforehand; he should have the patient in a reclining position, with clothes loose, so as not to interfere with respiration; should have his rat-tooth forceps, nitrite of amyl, and ammonia, and know their uses and when to use them, and artificial respiration. 7. In operations on the ano-genital region, and the evulsion of the toe nail, complete loss of sensation in these parts should never be allowed, and no operation on these parts at all should be performed under an anæsthetic, unless by approval of a full consultation.

In the discussion which followed Drs. Finnell and Girdner both gave as the result of their experiments that it was next to impossible to chloroform persons in their sleep, as they always found such persons awoke with a slight cough and indications of alarm.—Dr. W. J. Morton spoke of the safety of ether as against chloroform, and considered the choice of an anæsthetic as the most important medico-legal point after all. He said that with chloroform it was always a "toss up" with death, and that it was not carelessness of administration that kills—it was chloroform. True, chloroform had the advantage in agreeableness and amount. As to rapidity there was little difference. Chloroform, according to statistics—and we all know how many deaths are not recorded—is stated to be eight times more dangerous than ether. Richardson placed death from chloroform at 1 in 2500; Andrews, that from ether at 1 in 43,000. Chloroformists were blind to the weight of scientific evidence against this agent. France had used ether from the beginning, and he was glad to find that in England it was coming more into use. Dr. H. McNaughton's report showed that ether was used in a greater number of hospitals than chloroform.—Drs. Bermingham and Miller both spoke of the danger of chloroform, and gave evidence of its fatal effects in their experience of its use.—Dr. Sayre the younger objected to the general denunciation of chloroform, and appeared alone in that opinion. He did not think it was dangerous; on the contrary, he thought it was safer than ether. In his experience with chloroform he had never seen a death from it.—In reply to this, Dr. Morton inquired if it was not an extraordinary argument that each chloroformist must "kill his man," so to speak, before being willing to see any danger in his preferred anæsthetic. According to such a view the experience of others and the science of the times had no value.—Dr. Johnson, in closing the argument, said that the whole question as to which anæsthetic should be used was settled by the fact that chloroform kills without warning; ether does not: therefore the physician is criminally responsible who uses chloroform. He considered that a physician who pursues a course of treatment which is no longer orthodox is in the same position as one who meditates a homicide. That was the law in the United States on this point.

Aug. 11th, 1882.

PARIS ACCLIMATISATION SOCIETY.—Among the medals and prizes awarded by the Acclimatisation Society of Paris at its annual meeting were a gold medal to Sir James R. G. Maitland of Sauchie, near Stirling, for his establishment of fish culture; a silver medal to Mr. James E. Harting, for his work on "Ostrich Farming and Historical Researches on the Extinct Animals of Great Britain;" a silver medal to Mr. Harvie Brown, for his work on "The Reintroduction of the Capercalzie into Scotland;" and a sum of 300 francs to Mr. Alfred Wailly of the Clapham-road, for his successful labours in breeding and crossing exotic silkworms.

Obituary.

DR. CHARLES MOREHEAD, C.E.I.

THIS distinguished member of the medical service of India died at Wilton Castle, Redcar, Yorkshire, on Aug. 24th, in the seventy-fifth year of his age. Dr. Morehead was the youngest son of the late Reverend Robert Morehead, D.D., Rector of Easington, Yorkshire, who for many years before had been the incumbent of one of the largest episcopal churches in Edinburgh, where the subject of this notice was born and educated. Charles Morehead was from boyhood an earnest student. After receiving an excellent general education, he began his medical studies in the University of Edinburgh, where he soon distinguished himself in every branch of science. From an early period of his career he attracted the attention of Professor Alison by his zeal in the prosecution of clinical medicine, and to the end of his university career was a favourite pupil of that much-loved physician, whose clinical clerk he became. Having taken his degree, Dr. Morehead proceeded to Paris, and for more than a year pursued his clinical studies under Louis, keeping up intimate intercourse with that great physician until his death. In 1829, he entered the Bombay Medical Service, and after the usual probationary course served on the personal staff of Sir Robert Grant, Governor of Bombay. From an early part of his career Dr. Morehead was a contributor to the Transactions of the Medical and Physical Society of Bombay, of which he became President in 1837, a position he retained until the year 1859. On the death of Sir Robert Grant, in 1838, Dr. Morehead was appointed to the European and Native General Hospitals of Bombay, and in 1845 became the first principal in the Grant Medical College, and Professor of Medicine in that institution. On the establishment of the Board of Native Education in 1840, he was appointed secretary to the Board, an office he held for five years. Dr. Morehead continued to hold his position as principal of the Grant Medical College and physician to the Jamsetjee Jejeebhoy Hospital until 1859, when he returned to Europe, and finally retired from the service in June, 1862. He was appointed honorary surgeon to the Queen in 1861, and, somewhat late in the day, his eminent services to the State were recognised by his being created a Companion of the Indian Empire. The work by which Dr. Morehead was best known in Europe was his "Researches on the Diseases of India," a work of rare merit, built on the sure foundation of careful clinical experience. From his youth upwards he was a painstaking case-taker. Trained, as we have seen, in clinical studies by such great diagnostic physicians as Alison and Louis, he was *facile princeps* in this difficult part of the physician's art, and not in tropical diseases only, but also in cardiac and pulmonary affections; he could always in this particular hold his own in consultation with physicians in any part of the world. As a teacher Dr. Morehead will long be remembered in the school he may be said to have founded in Bombay. In the hospitals fortunate enough to have had him as leading physician, the diagnostic faculty of which we have spoken had an ample field for its exercise, of which his pupils had the benefit; to their service he gave his time, his great abilities, and his vast experience without stint or measure, and we cannot wonder that the native and Eurasian community of Bombay, to whose service he devoted his life, held him in high esteem, and will, now that he rests from his labours, cherish his memory as that of a friend to the best interests of their respective races. Whatever may be the future of the Medical Service of India, it has a past of which its surviving members may well be proud. In the long list of those who in India did honour to our profession, there are few names more deserving of fame than that of Charles Morehead.

THE SCARLET FEVER EPIDEMIC AT ACCRINGTON.—This outbreak is assuming still more alarming proportions. This week between thirty and forty new cases have been reported to the local authority, and there have been four more deaths, making about forty fatal cases since the beginning of August. The fever has extended to Oswaldtwistle, where several cases are reported to have occurred.

Medical News.

BRITISH MEDICAL SERVICE.—The following is a list of the candidates who were successful for appointments as Surgeons in this Service at the competitive examination in London, on Aug. 21st:—

	Marks.		Marks.
Macpherson, W. G.	2365	Stuart, J. R.	2015
Simpson, R. J. S.	2305	Morse, T. R.	1975
Reid, F. W.	2233	Deeble, W. B. C.	1960
Phipps, E. V. A.	2180	Prendergast, J. M.	1935
Hunter, V. E.	2100	Bond, R. P.	1905
Baird, A.	2155	Stewart, J. McD.	1890
Hamilton, T. W. O'H.	2055	Thomas, G. T. H.	1870
Semple, D.	2030		

INDIAN MEDICAL SERVICE. — The following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington-house, on Aug. 21st and following days. Thirty-nine candidates competed for eight appointments. All were reported qualified:—

	Marks.		Marks.
Leahy, A. W. D.	2960	Davis, R. E. S.	2340
Webb, W. W.	2530	Fuller, H. K.	2330
Weir, R. R.	2510	Neilson, W. H.	2230
Burke, W. H.	2377	Crimmin, John	2185

NAVAL MEDICAL SERVICE. — The following is a list of the successful candidates for appointments as Surgeons in the Royal Navy at the competitive examination at Burlington-house on Aug. 21st and following days. Eight other candidates were reported by the examiners as qualified:—

	Marks.		Marks.
Logan, J. S.	2060	Martin, J. M'C.	1850
Lawson, R. J.	2030	Bagnall-Oakeley, J. L.	1770
Cashin, J.	2025	Woore, F.	1755
Nunan, T.	1980	Craig, W. M.	1740
Norman, W. H.	1970	Jackson, H. S.	1700
Todd, P. E.	1950	Phillips, J. M.	1695

APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 31st:—

Batt, Richard Bush Drury, Camden-road.
Kirk, Thomas Deck, Creavory, Antrim, Ireland.
Serres, John James, Colchester House, Anerley.
Whitcombe, Philip Percival, Gravesend.

The following gentleman also on the same day passed the Primary Professional Examination:—

Llewellyn, James Davies, London Hospital.

The following gentlemen passed and received certificates to practise, on Sept. 7th:—

Church, William, Hereford-road, Bayswater; Hull, Walter, Acton, Middlesex; Larder, Herbert, Denmark-hill, Wimbledon.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Bullock, Thomas Warren, St. Thomas's Hospital; Jefferies, Horace, Queen's College, Birmingham; Plummer, Henry Geo., Guy's Hospital; Mander, Percy Robert, Westminster Hospital.

THE late Dr. John Boyd Baxter, for many years Procurator Fiscal in Dundee, has bequeathed the sum of £10,000 to the College in Dundee, and £1000 to the Royal Infirmary.

THE population of Iceland, which has already suffered severely from famine, is being decimated by an epidemic of measles.

THE alleged pollution of the river Derwent at Buxton is about to be made the subject of a public inquiry by the conservators of the Trent.

MR. CHRISTOPHER COOKE, late of 51, Lincoln's-inn-fields, has bequeathed £10 each to the Cornwall Infirmary, the Hampshire County Hospital, and King's College Hospital.

TYPHUS FEVER.—Three Roman Catholic Priests have recently died from typhus fever at, or in the neighbourhood of, Liverpool, within a comparatively short period of each other, having, it is supposed, caught the infection while visiting members of their congregation who were stricken with the disease.

MEDICAL MAGISTRATE. — H. S. Gaye, M.D., of Newton Abbot, having resigned the coronership, has been placed on the Commission of the Peace by the Lord Lieutenant of the County.

IT is asserted that in consequence of the prevalence of foot-and-mouth disease in Staffordshire, the County Agricultural Society has abandoned its annual show, which was to have been held at Lichfield at the end of the present month.

PRESENTATION.—A few members of the Lily of the Vale Lodge, A.O. Free Gardeners, recently waited upon Dr. Cairns at his residence and presented him with a handsome eight-day clock as a mark of esteem on the occasion of his marriage. Dr. Cairns thanked the members for the kindly feeling manifested towards him.

DIPHTHERIA.—At Port Washington, Long Island, U.S.A., ten persons in one family are said to have been suffering from diphtheria, which is supposed to have been contracted by drinking from a tin dipper which had been used by a boy in a neighbouring family who had the disease.

AT Crediton, typhoid fever has made its appearance with such severity that the authorities have prohibited the reopening of the public schools of the town, and the scholars, on presenting themselves, were ordered to return to their homes.

A LETTER was read at the meeting of the monthly board of the Bucks Infirmary on the 6th inst. from Mr. Ceely, tendering his resignation of the post of surgeon to this institution, which he has held for a period of fifty years. The board expressed in a resolution its deep sense of the valuable services rendered by Mr. Ceely to the infirmary during the past half-century.

THE Aberdeen University Authorities have just received from Mrs. Marr, widow of the late Mr. John Marr, music-seller, of Aberdeen, a gift of £2000 to provide for the foundation of medical bursaries in such department as the Faculty and Senators may advise. This is the first step towards the establishment of medical bursaries in Aberdeen, and the gift has been made in response to a public desire that the bursaries should not be exclusively confined to the Arts and Divinity Faculties.

AT a recent meeting of the Liverpool City Council the Health Commitee presented a request that they might be empowered to take the necessary steps for procuring a provisional order for amending the Local Sanitary Acts by providing for the notification of infectious diseases. Mr. A. B. Forwood moved the confirmation of the committee's request, and stated they had in contemplation to recommend the compulsory registration of all cases of infectious disease. The Council ultimately agreed to the Health Committee's request.

ANTI-VACCINATION.—At the Leicester Borough Police-court, a few days ago, nineteen persons were summoned for refusing to comply with the Compulsory Vaccination Acts by not having their children vaccinated. There are several thousand unvaccinated children in the town, and the number is increasing at a very rapid rate, although there are more prosecutions under these Acts in Leicester alone than in all the other large towns in the kingdom put together. Notwithstanding this state of things, the town is perfectly free from small-pox. Eighteen of the defendants were fined 10s. each or seven days' imprisonment, and the other case was adjourned.

MEDICAL PRIZES.—At the recent meeting of the British Medical Association, the Stewart prize, of the value of 50 guineas, founded by Dr. A. P. Stewart, F.R.C.P., was awarded to Dr. Vandyke Carter, M.D. Lond., Surgeon-Major, Indian Medical Department, for his work entitled "Spirillum Fever." At the same meeting the Middlemore prize, of the value of 60 guineas, was awarded to Mr. William Adams Frost, F.R.C.S., Assistant Ophthalmic Surgeon to St. George's Hospital, for his essay on "The Scientific and Practical Value of Implements in Ophthalmic Medicine and Surgery made or published during the past three years."

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BARROW, ALBERT BOYCE, M.B.Lond., F.R.C.S.Eng., has been appointed Assistant-Surgeon to the West London Hospital.

BIRDWOOD, ROGER ALAN, M.A.Camb., M.R.C.S., has been appointed Surgeon to the Wynaad Medical Board, Pundalur.

BUSH, J. PAUL, M.R.C.S., L.S.A.Lond., has been elected House-Physician of the Bristol Royal Infirmary, vice Dr. Watson, resigned.

COBBOLD, C. S. W., M.D., Assistant Medical Officer at Colney Hatch Asylum, has been appointed Medical Superintendent of Earlswood Asylum, vice Grabham, appointed Commissioner in Lunacy for New Zealand.

COLLINS, G. H., M.R.C.S., has been appointed Resident Medical Officer at the Wednesbury Small-pox Hospital.

COURTENAY, JOHN HOYSTED, M.K.Q.C.P.I., L.R.C.P.Lond., L.R.C.S.I., L.M., has been appointed Honorary Surgeon to the Echuca District Hospital, Echuca, Victoria, Australia.

CRADDOCK, FREDERICK HURST, B.A.Oxon., M.R.C.S., L.S.A.Lond., Senior Assistant Medical Officer and Deputy-Superintendent of the Worcester County and City Asylum, has been appointed Medical Superintendent of the Gloucester County Asylum.

DOUDNEY, G. H., M.B., has been appointed House-Surgeon to the Seamen's Hospital, Ramsgate, and Visiting Surgeon to the Ramsgate and St. Lawrence Dispensary, vice E. W. Farmer, M.R.C.S., resigned.

GARMAN, JOHN C., L.R.C.P.I., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Hackney Union.

HENDLEY, HAROLD, M.R.C.S., has been appointed House-Surgeon to the West London Hospital, vice Rickard W. Lloyd, M.R.C.S., resigned.

HEY, Mr. GEO., has been appointed Vaccination Officer for the Bradford Union.

HOPKINS, JOHN WALTER, M.R.C.S., has been appointed House-Surgeon and Secretary to the Royal Isle of Wight Infirmary, Ryde, vice T. M. Kendall, L.R.C.S.Ed., L.R.C.P.Ed., resigned.

KENNA, DENIS P., L.R.C.S.I., has been appointed Resident Surgeon to St. Vincent's Hospital, Stephen's-green, Dublin; also Visiting Surgeon to St. Vincent's and Mullen's Convalescent Homes, Blackrock, co. Dublin.

MITCHELL, H., M.D.Ed., has been appointed Medical Officer for the First District and Workhouse of the Cockermouth Union.

MOORE, Mr. E. H., has been reappointed Analyst for the Eastern Division of the County of Sussex.

PENNY, H. J., L.K.Q.C.P.I., has been appointed Medical Officer for the Third District of the Barnet Union.

PROCTOR, SAMUEL FITZGERALD, M.R.C.S., L.R.C.P.Ed., has been appointed Assistant Colonial Surgeon to the Colony of St. Lucia, West Indies.

RAWLE, FRANCIS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Titchfield District of the Fareham Union.

SIDDALL, GEORGE, M.R.C.S., L.S.A.Lond., has been appointed Vaccination Officer for the Cleckheaton District.

SWABY-SMITH, C., M.R.C.P.Ed., M.R.C.S., has been appointed Honorary Surgeon to the West Metropolitan Fire Brigade.

THOMPSON, C. EMILIUS, M.R.C.S., has been appointed Medical Officer to the Yatala Labour Prison, Salisbury, S.A.

THOMPSON, JAMES, M.D., M.R.Q.C.P., L.R.C.S.I., has been elected Surgeon to the Surgical Appliance Society, Finsbury-circus.

WARREN, WILLIAM, L.R.C.S.I., L.M.K.Q.C.P.I., has been elected Honorary Physician to the Alfred Hospital, Melbourne.

WEST, JOHN A., M.R.C.S., L.S.A.Lond., A.K.C., has been appointed Clinical Assistant and Registrar to the North-Eastern Hospital for Children, Hackney-road.

Births, Marriages, and Deaths.

BIRTHS.

BARR.—On the 6th inst., at St. Domingo-grove, Everton, the wife of James Barr, M.D., of a son.

BEAMAN.—On the 1st inst., at Bedford, the wife of Brigade-Surgeon A. H. Beaman, of a daughter.

DINGLE.—On the 4th inst., at 61, Bunhill-row, Finsbury, the wife of William Alfred Dingle, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A.Lond., of a daughter.

EDWARDES.—On the 5th inst., at Stanley House, Bath-road, Hounslow, the wife of W. Whitfield Edwardes, M.D., of a son.

JACKSON.—On the 12th inst., at Lansdowne House, Tottenham, the wife of G. H. Jackson, jun., Esq., Surgeon, of a son.

KESTEVEN.—On the 6th inst., at Holloway-road, N., the wife of W. H. Kesteven, M.R.C.S., of a son.

MEARNS.—On the 1st ult., at Prince Albert, Cape of Good Hope, the wife of J. Herbert Mearns, M.D., J.P., of a daughter.

NICHOLSON.—On the 6th inst., at Benalla, S.A., the wife of John Nicholson, M.D., of a son.

OSWALD.—On the 1st inst., at 43, Clapham-road, S.W., the wife of Robert J. W. Oswald, L.R.C.P.Ed., L.R.C.S.Ed., M.R.C.S.E., &c., of a daughter.

PARSONS-SMITH.—On the 30th ult., at Park-Hyrst, Addiscombe-road, Croydon, the wife of Dr. Parsons-Smith, of a son.

PENRUDDOCKE.—On the 5th inst., at Winchcombe, Gloucestershire, the wife of Charles Penruddocke, M.R.C.S., L.R.C.P.Ed., of a son.

REID.—On the 5th inst., at 12, Bridge-avenue, Hammersmith, the wife of John Reid, M.D., of a daughter.

SEMON.—On the 9th inst., at Welbeck-street, Cavendish-square, W., the wife of Felix Semon, M.D., M.R.C.P., of a son.

THOM.—On the 10th inst., the wife of Alex. Thom, jun., M.A., M.D., & C.M., of a son.

WITHINGTON.—On the 4th inst., at Rodney-street, Wigan, the wife of Herbert Withington, L.K.Q.C.P.I., of a daughter.

MARRIAGES.

CLARKE—JUKES.—On the 12th inst., at St. Stephen's Hampstead, Fincastle George Barlow Clarke, M.D., second son of Major-General Wm. Calcott Clarke, late Madras Staff Corps, to Kate Blanche D'Almaine, second daughter of Miles Prendergast Jukes, Esq., of Belsize-park, N.W.

CLOUGH—CREE.—On the 7th inst., at St. John's Church, N., Morley Eodison Clough, of Hambledon, Hants, to Annette Cree, only daughter of Edward H. Cree, Esq., M.D., Deputy Inspector-General of Hospitals and Fleets (retired).

FLANAGAN—HILL.—On the 26th July, at the Pro-Cathedral, Georgetown, Demerara, H. E. B. Flanagan, Army Medical Department, only son of Lieut.-Colonel J. B. Flanagan (late 81st Regt.) to Marian Emily, only daughter of the late James Hill, Esq., of Demerara.

HALLETT—PRICE.—On the 6th inst., at the Parish Church, Kimbolton, Henry Arthur Hallett, M.D., son of the late Colonel Hallet, C.B., to Mabel, third daughter of the Rev. E. H. Price.

HOWE—LE FEAUX.—On the 30th ult., at the Parish Church, Llanidloes, Jonas Howe, L.R.C.S.E., of Castle House, Llanidloes, to Emma Elizabeth (Emmie), youngest daughter of William Le Feaux, Esq., of Penrallt House.

LIEBSTEIN—FLETCHER.—On the 2nd inst., at the Congregational Church, Bournemouth, Hermann Liebstein, M.D., of Drayton-park, London, to Jeannie, younger daughter of the late Rev. Joseph Fletcher, of Christchurch, Hants.

MACCULLOCH—ROBERTS.—On the 29th ult., at the Church of St. John the Baptist, Islington, S. H. Macculloch, M.B.Ed., C.M., of Sydney, N.S.W., to Jane, daughter of Edward Roberts, Esq., of Downham-road, N.

MOLINEUX—FINCHER.—On the 2nd inst., at Hastings, Sussex, Edward Molineux, M.R.C.S., L.R.C.P., son of Geo. James Knapp, of Clifton, to Isabella Rosalind, eldest daughter of the late Rev. J. Guillemard Fincher, Rector of St. Alban's, Manchester.

MURRAY—MACKAY.—On the 30th ult., at the Cathedral, Inverness, R. D. Murray, M.B., Surgeon H.M. Bengal Army, to Mary M'Innes, eldest surviving daughter of Deputy-Surgeon-General Mackay, M.D., Indian Army.

PAYNE—MACPHERSON.—On the 2nd inst., at St. Mary Abbott's, Kensington, Joseph Frank Payne, M.D., Fellow of Magdalen College, Oxford, and Assistant-Physician to St. Thomas's Hospital, to Helen Curtis, eldest daughter of John A. Macpherson, of Umina, Toorak, Melbourne, and Pembridge-crescent, Bayswater.

PEIRCE—FEARNLEY.—On the 5th inst., at Christ Church, Moreton, by the father of the bride, Francis Peirce, M.D., Hoylake, Cheshire, son of John Peirce, M.D., F.R.C.S.I., late of Newcastle West, Limerick, to Rosa, second daughter of the Rev. M. Fearnley, Rector of the Parish.

PENDAVIS—GODEFROY.—On the Feb. 9th, at San Pablo, Iquique, S.A., William Frederick Pendavis, L.R.C.P.Ed., M.R.C.S.Eng., &c., son of the late Rector of St. Peter's Manchester, to Luisa, daughter of the late Mons. Emile Godefroy, of Bordeaux, France, and Lima, S.A.

PERRY—DONALDSON.—On the 5th inst., at St. Saviour's Church, Bath, Deputy Surgeon-General W. Perry, late Royal Artillery, to Adeline Louisa, third daughter of the late Rev. J. W. Donaldson, D.D.

PILLEAU—JOHNSTONE.—On the 5th inst., at St. George's, Hanover-square, Henry Pilleau, Deputy Inspector-General of Hospitals, to Mary, widow of H. E. Johnstone, late of Broncroft, Salop.

ROWE—WHEELHOUSE.—On the 7th inst., at the Parish Church, Leeds, by the Rev. John Gott, D.D., the Vicar, George Herbert Rowe, M.R.C.S., to Caroline Agnes, eldest daughter of C. G. Wheelhouse, F.R.C.S., of Hillary-place, Leeds.

SOUTHAM—HUGHES.—On the 7th inst., at the Parish Church, Staverton, S. Devon, Frederic Armitage Southam, F.R.C.S., of Pendleton, Manchester, to Amy Florence, daughter of the Rev. J. B. Hughes.

STEWART—BREMNER.—On the 5th inst., at the Manse, Portsoy, William Lemmon Stewart, M.A., M.D., of Portsoy, to Jessie Anne, eldest daughter of the late Alexander Bremner, Esq.

WILSON—WARD.—On the 29th ult., at St. Luke's, Maidenhead, Joseph Wilson, M.D., 42nd A.L.I., to F. Gertrude, daughter of R. A. Ward, Esq.

DEATHS.

BADDELEY.—On the 8th inst., at Gnosall, Staffordshire, George Augustus Baddeley, M.R.C.S., aged 58.

GROSS.—On the 5th inst., at St. Saviour's Infirmary, Westmoreland-road, Walworth, S.E., Constance, infant daughter of Charles Gross, L.R.C.P.Lond. &c., Medical Superintendent.

HAWARD.—On the 28th ult., at Little Blakenham, Ipswich, Deputy Surgeon-General Wallace Haward, aged 51.

PITMAN.—On the 1st inst., at his residence, Wyborne, Cheltenham, Henry Pitman, Deputy Inspector-General of Hospitals, Indian Army, retired, eldest son of the late Captain Pitman, of H.M.'s 59th Regiment, aged 64.

RAYNER.—On the 8th inst., at New Hall, Birstal, near Leeds, Robert Rayner, M.R.C.S.E. & L.S.A.Lond., aged 57.

REDWOOD.—On the 30th ult., at The Lawn, Rhymney, Monmouthshire, Lewis Redwood, M.R.C.S., L.S.A.Lond., for 45 years Chief Surgeon of the Rhymney Iron Works, aged 73.

STUMMER.—On the 4th inst., at Craiglands, Ilkley, Yorkshire, Dr. Leopold Stummer, aged 73.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

"THE STUDENTS' NUMBER."

WE have received several communications from the authorities of hospitals omitted from the Students' Number of THE LANCET. We endeavoured as far as possible to insert all hospitals associated with medical schools or having educational classes. Hospitals possessing neither of these qualifications were in many instances unavoidably omitted. Respecting the mistakes referred to, we have to state that the lists were prepared from "copy" officially supplied.

F.R.C.S. Edin.—There is no examination for this title. Next to holding a diploma from one of several corporations, the principal condition of fitness is that the candidate shall be able to pay £25 "to the college funds." Attempts are, we know, made to palm off "F.R.C.S. Ed." as equivalent to and equally honourable as "F.R.C.S. Eng.;" but these attempts, it is needless to say, are dishonest.

A Beginner will find the information he asks for in the Address to Students, contained in our last issue.

URTICARIA AND MOSQUITO-BITES.

To the Editor of THE LANCET.

SIR,—In your issue of August 19th, "L.R.C.P." asks for a suggestion as to the treatment of a case of urticaria. My experience of the subject being small, I feel the greatest diffidence in venturing upon an opinion, and only do so because no response has hitherto been forthcoming from more competent authorities. I read recently in a medical paper that Dr. Schwimmer treats urticaria by the internal administration of atropine. I cannot say that I have had the opportunity of verifying the efficacy of the remedy in the ordinary form of the affection, but I can testify to its value in the variety produced by the bites of gnats and mosquitoes.

The past summer, notwithstanding the moderate degree of heat, has been remarkable in Paris for the number of these insects, and I for one have been severely visited by them. In my case each bite gives rise in the course of a few minutes to a raised white lump, which disappears after a variable time, leaving an irritable papule, lasting for some days. I find that the application of a solution of atropine shortens the whole process, and instantly relieves the itching. The solution I have used is one part in a thousand.

"L.R.C.P." does not say what are the remedies he has employed. I take it that, with the exception of the sluggishness of the liver, all other likely sources of reflex irritation have been eliminated. Whether there be any gastro-intestinal disturbance or not, this condition of the liver might be benefited by a course of rhubarb and quinine. If all means of removing and allaying irritation fail, there still remains the possibility of inhibiting the morbid reflex by bromide of potassium; and if it comes to this, it would be well to associate it with arsenious acid.

I am, Sir, yours faithfully,

Paris, August 31st, 1882. OSCAR JENNINGS, M.D.

To the Editor of THE LANCET.

SIR,—Having met with a number of cases similar to the one described by "L.R.C.P." in your issue of August 19th, I should recommend him to try mercurial treatment, which has proved the most successful in my hands. For a child four years old I would advise one grain of mercury-with-chalk, to be given three times a day, combined with the same quantity of compound cinnamon powder in order to prevent griping. One week of this treatment has generally sufficed in my hands to subdue the more severe symptoms, and I have then allowed the eruption to take its own course, which has usually been to die away gradually. Acetate of lead ointment may be used externally to relieve the itching, and an aperient of tartrate of soda (say, thirty or forty grains in his case) may be given in the morning before breakfast once or twice a week. Many of the cases are, I believe, syphilitic.

I remain, Sir, yours obediently,

Oldham, August 29th, 1882. ANACHARIS.

HABITUAL DRUNKARDS.

M.D., writing to the *Standard*, makes the following suggestion:—"There is one way of dealing with habitual drunkards which has not yet been noticed—that is, to send them for a voyage in a teetotal ship. If a 'retreat' could be established on a small island—say one of the Channel or Scilly Isles—there would be no difficulty from neighbouring public-houses, and no necessity to send a guide with the patient when he goes out."

Dr. Campbell Black (Glasgow).—The blocks have been received.

Mr. Wm. Anderson (Welbeck-street).—The article will appear next week if possible.

Mr. H. Kestevan (Holloway-road).—We may probably notice the production enclosed in our correspondent's note.

"DIGITATED SOCKS."

To the Editor of THE LANCET.

SIR,—I was glad to find in a recent number of THE LANCET a notice of the above, which appear to be very little used at home, as they are almost unknown abroad. After wearing them constantly for many years, I have formed a very high appreciation of their value, especially in the tropics, where the trifling additional expense and trouble which their use involves are much more than compensated for by the cleanliness and comfort which are thereby insured. Whilst the barbarous and cruel custom which prevails in China of contracting the female foot finds imitators among a large portion of the British public, and deformity, with a halting gait, is vainly supposed to secure more admirers than natural ease and grace of deportment, those invaluable foot coverings will of necessity be disregarded, because the breadth of the shoe or boot must contain ten thicknesses instead of two of silk, thread, or other material. Except in the naval and military services, boots and shoes are, as a rule, made too narrow. Too little pains are bestowed upon the fitting of children's feet, and the injury resulting from compression of the toes in infancy and childhood can never be repaired. The veterinary surgeon gives much attention to the shoeing of horses, whilst the family doctor pays little or no regard to the children's feet or shoes. They have to put on the number which is nearest to their size, when perhaps the whole thing is a misfit; whereas a farrier will rarely, if ever, put a shoe upon a horse without heating and shaping it a little. The importance of being "kind to our old age" is well illustrated in the treatment of the feet. All the adages about "poor feet," "treading on corns,' "as easy as an old shoe," &c., doubtless have their rise in the needless suffering which is inflicted by parents upon children, and by ignorant and foolish people on themselves. Why should not a new shoe be just as comfortable as the old one? Most certainly it ought to be, and more so. Let us abandon the silly and most injurious high heel, add to the breadth of the sole, let the toes be entirely free from pressure or restraint, use digitated socks, bind the shoe firmly upon the instep, and so soon as the necessity for an unnatural covering ceases, put off the leather shoes, and habitually wear indoors something lighter and more pervious to the moisture of the skin. As much as possible let children run about in the house without any covering on their feet at all, putting them on and off at the threshold like the Japanese. Their straw sandals, without any socks, are admirably adapted for indoor use, and a beginning might very well be made with the young people. These sandals, when lined with cloth or leather, are also an invaluable accompaniment of the digitated socks.

The human foot in England has been so long neglected and concealed in dark, dismal recesses, never seeing the air and light, that its persisten maltreatment has resulted in deformity and degradation. Why should it not receive the same consideration as the hand? We are so accustomed to view the foot, as a whole, encased in its often ill-chosen covering of patent leather, that to display it in its natural form would be deemed an impropriety, as the growth of hair upon the face was considered in England twenty-five years ago. In due time, however, common sense must prevail over ignorance and prejudice.

I am, Sir, yours faithfully,

Hong Kong, July 12th, 1882. W. J.

Inquirens should apply at the Admiralty, Whitehall, for the require information.

H. C. J.—We cannot oblige our correspondent.

Mr. Ed. N. Edmunds.—The subject shall not be lost sight of.

Mr. J. W. Stedman (Godalming).—Next week.

NORTH-WEST LONDON HOSPITAL.

To the Editor of THE LANCET.

SIR,—In your issue of Sept. 2nd it is stated that the committee of this hospital are in treaty for the purchase of two houses in Bell-street, Edgware-road, for a children's hospital. I beg to state that my committee have no intention of giving up the houses they now hold in the Kentish-town-road, where twenty six beds are provided. On the contrary, they are about to build a large waiting-room and additional consulting-rooms, &c., on those premises. Will you kindly give this correction in your next number?

I remain, Sir, your obedient servant,

ALFRED CRASKE, Sec.

North-West London Hospital, Kentish-town-road, N.W., Sept. 5th, 1882.

Mr. H. C. Moore (Hereford).—In THE LANCET of the 26th ult., at page 337, will be found a letter on the subject containing the address, and offering assistance to any medical man desirous of experimenting.

Mr. R. W. Western.—Certainly not.

"BICYCLE AND TRICYCLE RIDING."

To the Editor of THE LANCET.

SIR,—I have watched with considerable interest the letters which have appeared from time to time on the above subject, and as I differ in opinion partly from those gentlemen, I should feel obliged if you will insert the following. I have had considerable experience both as a rider and also of observing others who make use of the bicycle, both as means of exercise and in the capacity of racing. I also hold the post of honorary surgeon to one of the largest clubs out of London. Numbers of bicyclists in my own club and also in neighbouring clubs have consulted me as to their chance of becoming affected either with hernia or varicose veins. I have always been very careful in giving my opinion.

1st. Those who already have a hernia should be extremely careful in not fatiguing themselves, as I find that during the taking of undue exercise—as, for instance, racing or hill-climbing—on the machine, the tendency is to the coming down of the rupture. I have seen a case of this where a competitor had to be lifted off his machine. I returned the hernia without any difficulty, but he was violently sick. Also a truss should constantly be worn, as a well-fitting truss can be kept in position without any difficulty.

2nd. Those who are likely to be affected with hernia should observe the above precautions (with the exception of the wearing of a truss, which is unnecessary), as there is a distinct predisposition in some persons.

3rd. As to bicyclists and tricyclists suffering from varicose veins, they are few and far between, and the malady is seldom caused by the use of either the bi or tri order. It is most noticeable in those who do any large amount of running or walking, and in this faction there are numerous instances, more or less severe.

There is also another disease which is not mentioned by any of your correspondents—e.g., varicocele. I have known this brought on or aggravated in a few instances by long distances, constantly repeated, on either machines or in walking. This disease is far more common than is at present anticipated; still, I do not mean to say that it is caused by the use of the bicycle only where undue exercise is taken for great distances; but when present it is certainly made much worse if the person so affected takes an undue amount of exercise, but not so under any moderate amount.

As to whether the bicycle or tricycle is most likely to cause rupture, or, if present, aggravate it, I should think that the tricycle is the most likely, owing to its more open structure as compared with the bicycle, and also to the different action required by the muscles. But, taking the exercise as a whole, in moderation it is perfectly safe, and the good derived from it speaks for itself when we look at a collection of bicyclists making their way along the country roads, looking, without exception, as jolly and in as perfect health as anyone could wish to be; and in truth they are, on the average, the healthiest set of athletes in existence.

I am, Sir, yours very truly,
CHARLES WM. ROBINSON, M.R.C.S. Eng., &c.

North Shields, Sept. 6th, 1882.

To the Editor of THE LANCET.

SIR,—Mr. Westropp is quite right in supposing that his racing friends are suffering from varicose veins through bicycle-riding. In fast riding it necessarily follows that the veins of the lower extremity are filled faster than the saphena can empty them, and as racing men are of necessity much on the track even when not actually competing, it follows that a permanent over-distension of the veins ensues, which will often in these cases be found well marked as far up as the saphenous opening itself. Such a condition may of course happen to men of weak fibre who only ride moderately, and is naturally incidental to tricycle riders as well as bicyclists.

With reference to the statement that Mr. Westropp knows some persons suffering from hernia who dispense with their trusses when riding tricycles, it is only necessary to suggest that if he is their surgical adviser, he should inform them of the urgent need of their trusses being worn at all times except when lying down, since even tricycle-riding can hardly be a good alternative for truss wearing.

I am, Sir, your obedient servant,
W. G. CRESWELL, L.R.C.P. Edin.

Birmingham, Sept. 3rd, 1882.

To the Editor of THE LANCET.

SIR,—Whilst on the subject of bicycle riding, it may be interesting to some of your readers to be informed of a peculiarity which occurred to me some years ago, when practising on the then newly invented machine. It was this. When I became tolerably expert at the exercise, I invariably noticed, after being at it for about twenty minutes, that my left thigh swelled enormously—so much so that my trousers were distended to the utmost, without my feeling any pain whatever. I thought it prudent, however, to discontinue the recreation, which I was very fond of, and so cannot say whether a similar result would happen with the improved bicycle now in use. I may add that I am a fair athlete, a good pedestrian, and I ride a great deal; but in none of these pursuits have I experienced even a tendency to the discomfort above mentioned.

I am, Sir, yours truly,
M.R.C.S.

Southsea, Sept. 13th, 1882.

EXTRAORDINARY SURGICAL OPERATION AT ENNISKILLEN.

NEWSPAPER accounts of surgical operations, especially when full of details, imply a very great responsibility of the operator. Either he or some injudicious friend, whom he should disclaim with decision, must supply particulars. The professional feeling against such reports in lay papers is very strong.

Bibliophile.—The Library of the Royal College of Surgeons contains about 40,000 volumes, as also the Young collection of medical portraits, and some of those collected by Mr. William Wadd, a former member of the Council of the College; the remainder were obtained by the Royal Medical and Chirurgical Society, and Mr. T. M. Stone, of the College of Surgeons.

H. Y. P.—We cannot discuss such absurdities.

"SUCCESSFUL PRECAUTIONARY MEASURES AGAINST PUERPERAL FEVER."

To the Editor of THE LANCET.

SIR,—In your issue of August 19th, a letter appeared under the above heading in which the writer describes having used various antiseptic measures with a view of preventing the occurrence of puerperal fever in a woman who was delivered in the same room where there was a child suffering from scarlet fever; and apparently he is in doubt as to whether the non-occurrence of the disease was due to the measures adopted or not.

In order to show him that as favourable a result may follow without using any precautions whatever, I may mention that in December last year I attended a Mrs. N——, who was delivered of her eighth child; on coming downstairs from the bedroom I was asked to see Mrs. N——'s seventh child, who was suffering from a severe attack of scarlet fever, the rash being fully developed, with sore-throat, and a temperature in the axilla of 104°. Before leaving the house I gave special directions that on no account should the child be taken upstairs, that she should be kept in a separate room downstairs, and that the monthly nurse in attendance on Mrs. N —— should not be permitted to enter the room in which the child was to have been placed. I say was to have been placed because my directions were entirely ignored, so much so that on my visit to my patient on the following day, not only was my scarlet fever patient in the same room, but to my great surprise was in the same bed with her mother, and continued so until the latter came downstairs five days after delivery; the excuse for her being with her mother was that they were unable to get her to rest elsewhere. The little girl skinned freely and made a good recovery; the mother and infant did well; not a single occurrence took place to mar their convalescence. Subsequent to the mother coming downstairs, a second child took the disease and recovered. At no time were antiseptic or precautionary measures of any kind used.

I am, Sir, yours faithfully,
JOSEPH W. HILLES, L.R.C.P. & S.Ed.

Gargrave, Yorks, Sept. 4th, 1882.

St. George's.—Mr. Timothy Holmes, F.R.C.S., is surgeon-in-chief to the Metropolitan Police. Application should be made to him for the local appointment.

W. E. B.—Weiss and Co., 62, Strand.

F.R.S.—Fraser Brothers, Commercial-road East, London.

"VENESECTION: WHY IS IT SO RARELY PRACTISED?"

To the Editor of THE LANCET.

SIR,—In your issue of the 26th ult. Mr. Reynolds scarcely answers the question, but I will presume to try. Because the actual operation of opening a vein is never witnessed by the student. Few men now probably doubt its value any more than I who graduated eight years ago, and merely saw it described minutely by the class tutor. One does not like to bungle in so simple a matter, and as the friends of the patient might not like the novelty of the proposition, a man would naturally wish to feel that he could do it nicely. I never, knowingly, met anyone who cared to attempt it, and am constrained to admit my own stupid feeling about it, though I never let minor operations pass me.

I am, Sir, yours faithfully,
BOTHERED

Sept. 11th, 1882.

Perplexed.—The course of gestation, and eventually of parturition, will not necessarily be influenced by the injury to the head. The safest attitude is one of cautious expectancy.

Prof. Maclean is thanked.

Enquirer.—The report appeared in the *Surrey Advertiser*.

"THE POSITIVE TREATMENT OF GONORRHŒA."

To the Editor of THE LANCET.

SIR,—In an article on the above subject in THE LANCET, Sept. 2nd, your correspondent, "M.R.C.S. Eng.," omits to state the method of exhibiting the infusion of cubebs and iodide of potassium, &c., as to the quantity and time of administering each dose. In publishing so obviously valuable a prescription, I venture to state that "M.R.C.S. Eng." would benefit many of his brother practitioners by rectifying this omission.

I am, Sir, yours, &c.,
H. B.

Sept. 4th, 1882.

"MORBUS CORDIS."

To the Editor of THE LANCET.

SIR,—Mr. H. M. Tuckwell will find the lines published at 377 in THE LANCET of August 26th in *Punch* (last volume of 1880), in one of the last numbers for November or first number of December for that year. I remember reading them in a *Punch* that arrived about Christmas of that year at a station in India I was then living at. The "lines" were accompanied with an illustration in which a gentleman patient was sitting in an arm-chair in a dressing-gown spouting the verses, with his hand tightly grasping the region of the heart when his lady doctor came to see him with her phials of drugs. On his countenance was also depicted a very earnest, supplicating expression. I am afraid his patient, the ship's engineer, if he means to appropriate them to his own genius, is guilty of plagiarism (unless he contributed them to *Punch*). I have no volumes of *Punch* by me, but the verses, if not word for word, must be very nearly what appeared in that journal about the time I have specified. I am, Sir, yours, &c.,

Leeds, Sept. 4th, 1882. E. HOPKINS, Surg.-Major.

To the Editor of THE LANCET.

SIR,—A friend, who has read the lines on the "lady doctor," in last week's number of your journal, calls my attention to the fact that they have already appeared in *Punch*. It seems, therefore, that they must be taken rather as an instance of good memory than of original power of composition in right-sided hemiplegia.

I am, Sir, your obedient servant,

Oxford, Sept. 5th, 1882. H. M. TUCKWELL.

Australian (Liverpool).—E. L. Crowther, M.D. Aberd., L.R.C.P. Ed., referred to in THE LANCET of the 2nd inst. as having been re-elected Member of Parliament at Hobart, Tasmania, is also a M.R.C.S. Eng., and is a son of another member of the Legislature—viz., Mr. Wm. Lodwyk Crowther, F.R.C.S. Eng., to whom the Council of the Royal College of Surgeons presented the Honorary Gold Medal in 1869 for his many and valuable contributions to the Museum of the College. Of the six recipients of this medal since 1800, only two remain—viz., the octogenarian, George Bennett, M.D., F.R.C.S., and Dr. Crowther.

N. A. P.—The fee should be equally divided.

Mr. Kenneth W. Millican (Kinston).—The manuscript has been received.

"DISINFECTING DUSTBINS."

To the Editor of THE LANCET.

SIR,—I have read the article in your journal published on Sept. 2nd, page 363, on the above subject. I would most respectfully call your notice to the enclosed circular. It was from the constant complaints of nuisances arising from the non-emptying of dustbins that led to the manufacture of the "Combination Dustbin and Sifter." By its use all the troubles mentioned in your article are done away with. It is made entirely of galvanised iron, so that fires caused by hot cinders (a frequent occurrence) is impossible. It is intended to be wheeled off the premises every day to the dustman's cart and there emptied of its contents, which is a great saving of labour to the dustman and of litter caused by his repeated journeys with his basket. I may mention that eight of these machines are now in use in Greenwich Workhouse, and, with two on order, there will shortly be ten; and I am quite sure that Mr. Kelly, the master, will be pleased to show them to anyone in operation. The stationary dustbins on this establishment have been entirely dispensed with. I am, Sir, your obedient servant,

London, Sept. 6th, 1882. THOS. P. COOK.

*** From the diagrams in the circular, the "Combination" Cinder-bin and Sifter appear to answer the purpose intended.—ED. L.

Mr. C. A. Jones, L.R.C.P.—Our correspondent will get all information he desires on application to Mr. H. S. Carpenter, 150, Stockwell-road, S.W.

E. Tory (Liverpool).—The London University.

DRINKING WATER—PURE OR IMPURE?

To the Editor of THE LANCET.

SIR,—In the *Daily Telegraph* of Friday last I read the following under the head of "Bangor":—

"With respect to the water, which has been so strongly condemned by the district officer of health as being impregnated with fever germs, a report was read from Dr. Muter, South London Laboratory, who at the request of the board had analysed six samples of the water taken at points where the fever was most virulent. All these, with one exception, were of good quality and drinkable."

In a large establishment I know well, typhoid has been prevalent for a long time, and the water has been analysed by two eminent men, one of whom said the water was pure, the other condemning it *in toto*. Now, I would ask, if these things be so, how are we to determine accurately whether or no our water is pure? Are we not drifting into greater difficulties and troubles on these matters when we find eminent analysts totally differ than when we knew less, and probably took as much or more care, but in a less scientific manner.

I am, Sir, your obedient servant,

Sept. 11th, 1882. AQUA.

MILK ANALYSIS.

THE magistrates of Great Yarmouth had recently before them a milkman who had refused to sell milk to an officer of the local sanitary authority for the purpose of analysis. The case having been proved, and the defendant having been convicted for selling adulterated milk last year, he was fined 40*s.* and costs.

O. (St. Bartholomew's).—No introductory has been delivered at this hospital for some years past, instead of which the "old students" annual dinner" will take place, by permission of the governors, in the Great Hall of the hospital, on the evening of Monday, Oct. 2nd, when Dr. R. Martin will occupy the chair, to which several visitors have been invited.

Mr. Chalmers (Liverpool).—The chief medical officer to the General Post Office is Dr. Waller Lewis; Mr. G. Carrick Steet, F.R.C.S., is the second.

L.R.C.P. (Edinburgh).—The late Mr. Liston died before his turn came to be elected President of the College.

THE letters of Dr. Henry Walker and Mr. E. D. Tomlinson arrived too late for insertion.

L. S. D.—Yes. Our correspondent has the right to give a certificate.

Mr. Edward Ward.—The blocks should be sent with the reports.

Dr. Haughton's letter shall receive attention.

"AN EXTRAORDINARY CASE OF EARLY PUBERTY IN A BOY."

To the Editor of THE LANCET.

SIR,—It has occurred to me that the extraordinary child, described by Mr. T. Woods in THE LANCET of Sept. 2nd, might have expressed himself at birth somewhat in the following style.—I am, Sir, yours, &c.,

Sept. 6th, 1882. TOPSY-TURVY.

Doctor, I this world have entered
At the wrong end of my life;
All my thoughts on crime are centred,
And my tongue's with curses rife.

Doctor, can your deed be pardoned?
Could you ever have done worse?
Here you've brought me—old and hardened,—
I've assassinated nurse!

Doctor, as the years roll over,
I can only younger get;
Dotard, warrior, and lover,
Each in turn I must be yet.

Crutch and toothpick left, the dandy
Unto marbles must descend;
And at sixty, sugar-candy,
Measles, pap, and milk will blend.

Till a bearded baby ending
After threescore years and ten,
Folks will bless me, o'er me bending,
For I shall be guileless then!

John Jackson.—The prizes are confined to members of the College, who alone can compete for them. Write to the secretary.

Oculus should consult the article in the new number of the Royal London Ophthalmic Hospital Reports, just published.

Inquirer.—Next week.

Query.—Yes; legally bound to give a certificate without charge.

OUR correspondent from Stockport has omitted to enclose his address.

"OUGHT DISEASED MEAT TO BE USED AS HUMAN FOOD?"

To the Editor of THE LANCET.

SIR,—In reply to your correspondent on the above subject, I venture to say there can hardly be two opinions as to whether he was justified in condemning the meat under the circumstances described. A strong point in favour of the cow being diseased was the fact of slaughtering so soon after parturition. The prosecution, in cross-examination, might have elicited a reason for this, and should also have objected to the admission of the medical evidence for the defence, the witness never having seen it, and therefore unable to judge. It would have been interesting to know the condition of the calf—whether still-born, ill-nourished, or the like. It is always advisable to examine as much as possible both the flesh, including fat, and the offal, since, as in the last case occurring in my district, the "most marketable" pieces are retained for sale, while the rest are thrown along with the offal or buried in the manure heap, the offal most frequently affording the best evidence of disease. It has been my practice to advise the local authority to procure the additional opinion and evidence of some duly qualified veterinary surgeon, which materially aids the "case for the prosecution." Wilson's Handbook of Hygiene (sixth edition) contains some useful information on this subject. May not the result in this instance be looked upon as a "miscarriage of justice?"

I am, Sir, yours respectfully,

Sept. 6th, 1882. NATHAN HANNAH.

EGYPTIAN RELIEF FUND.

CAPTAIN RICHARDSON, of Leicester, has gratuitously supplied a very large stock of medicines to go to Alexandria this week with Lady Strangford. A large firm in London has followed this example.

ERRATA.—Page 409, London Hospital, the aural surgeons to this institutions are Dr. E. Woakes and Mr. T. Mark Hovell, F.R.C.S. Edin.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Neale, London; Mr. Bellamy, London; Dr. London, Bristol; Dr. Deacon, Armagh; Mr. Moor, London; Miss Surtees, Harlow; Mr. Hovell, London; Mr. Mollett, London; Dr. Larkin, Bilston; Mr. Steadman, Godalming; Dr. Jones, Kingsland; Dr. Norman Kerr; Mr. Burke, Hammersmith; Dr. Macdonald, Liverpool; Dr. Alexander, Glasgow; Mr. Walsham; Mr. T. W. Hughes, Dwyland; Mr. Johnston, Glasgow; Mr. Legg; Mr. Smith; Messrs. Turnbull and Wood, Newcastle-on-Tyne; Messrs. Longman and Co., London; Mr. Jordison, Malpas; Dr. Macadam, Edinburgh; Dr. Liddiard, Carlisle; Mr. Cooke, Powick; Dr. Webb, Carlshill; Mr. Allinson, Kingsland; Dr. Adams, Marlock; Mr. Millican; Dr. Brown, Twycross; Dr. Campbell Black, Glasgow; Mr. Heeles, Barrow-in-Furness; Mr. Bray, Darlinghurst; Mr. River; Dr. A. Walker, Beverley; Mr. Balvant, Bombay; Mr. Saint John, Cambridge; Mr. Headley, Melbourne; Mr. Tudor, Dorchester; Mr. Mookerjea, Bengal; Mr. Evans, Cardiff; Messrs. Stephenson; Mr. Townsend, Exeter; Messrs. Linton and Co., Manchester; Dr. Le Page, Durham; Messrs. Keith and Co., Edinburgh; Dr. Atkinson, Farnborough; Dr. Scott, Snaresbrook; Mr. Lownds, Liverpool; Mr. Forsyth, Birstall; Mr. Nathaniel, India; Mr. C. Hall, London; Mr. M. Wilson, London; N. A. P.; A. C. K.; Inquirer; Bothered; Chemist, Rotherhithe; Ethics; Enquirer; L. S. D.; Query; Indian Contingent; M.R.C.S.; A. G. B.; B. C. D.; M.D., Mile-end; E. S., Middlesborough; P. U. M. P.; North Wales Correspondent; Cantab; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Thorn, Crieff; Dr. O'Mullane, Nottingham; Mr. Spicer, Chard; Dr. Finch, Salisbury; Dr. Prowde, Melsondy; Dr. Law, St. Leonards; Mr. Fulton, Toronto; Dr. Masters, Hednesford; Mr. Alban, Bristol; Mr. Abbotts, Sheffield; Mr. Johnston, Barnstaple; Mr. Whitmore; Mr. Campbell, Torquay; Mr. Bullevant, Derby; Dr. Jones, Camberwell; Dr. Pearse, Botesdale; Mr. Shadwell, Ealing; Mr. Montford, Ludlow; Dr. Kerr, Crawshaw Booth; Mr. Pigott, Preston; Mr. Bride; Dr. Charteris, Arcachon; Mr. Cox, Cirencester; Mr. Tomson, Luton; Dr. Adams, Martock; Medicus, Newcastle; Lombardy; A. B. C.; A. H. C. B.; P. R. S.; P. B.; Chinchona, Old Trafford; W., Crondall; Surgeon, Poplar; A., Notting-hill; D. S., St. Helens; W. W. W.; R.; Doctor; J. M. H.; M. B., Bristol; Nemo, Ebbw Vale; Q. B.; Registrar, Bath; M.R.C.S., Huddersfield; M.B., Leatherhead; L. G., Dublin; Tarsus; H. S. P., Richmond; A. B. C., Wantage; Alpha, Darlington; M. E.; W. T., Stepney; R. N., Birmingham; Medicus, Stourbridge; G. P.; G. B.; L. A. H.; D., Reigate; &c., &c.

Leeds Mercury, Liverpool Daily Post, Derbyshire Times, Bristol Mercury, Queen's Own Gazette, Brighton Herald, The Metropolitan, Spectator, Broad Arrow, Land and Water, Sunday Times, Country Gentleman, Army and Navy Gazette, Manchester Guardian, Reading Mercury, Hastings and St. Leonards News, Bucks Herald, Graphic, Field, Greenock Advertiser, Greenock Telegraph, Birmingham Daily Post, Nottingham Daily Guardian, Nottingham Journal, Devon Evening Express, Melbourne Bulletin, Gazzetta degli Ospitali, Sussex Daily News, Free Press, Western Mail, Buxton Advertiser, Leeds Mail, Cape Argus, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, Sept. 14th, 1882.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sept. 8	30·38	N.E.	57	53	102	68	47	..	Bright
,, 9	30·36	E.	58	58	108	68	47	..	Hazy
,, 10	30·11	E.	63	61	79	69	48	..	Overcast
,, 11	29·74	W.	58	56	86	66	47	..	Overcast
,, 12	29·61	N.E.	50	48	82	58	45	0·13	Raining
,, 13	29·69	N.W.	48	47	96	62	41	..	Hazy
,, 14	29·63	W.	48	46	80	60	42	..	Foggy

Medical Diary for the ensuing Week.

Monday, Sept. 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Sept. 19.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Sept. 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

Thursday, Sept. 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, Sept. 22.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, Sept. 23.

ROYAL FREE HOSPITAL.—Operations, 2 P.M

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Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.